

Modelling Terrorist Behavior: Developing Investigative Decision Making Through the Analysis of Empirical Databases

Margaret Wilson, David Canter, and Alaster Smith
University of Liverpool

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Michael Drillings, Acting Director

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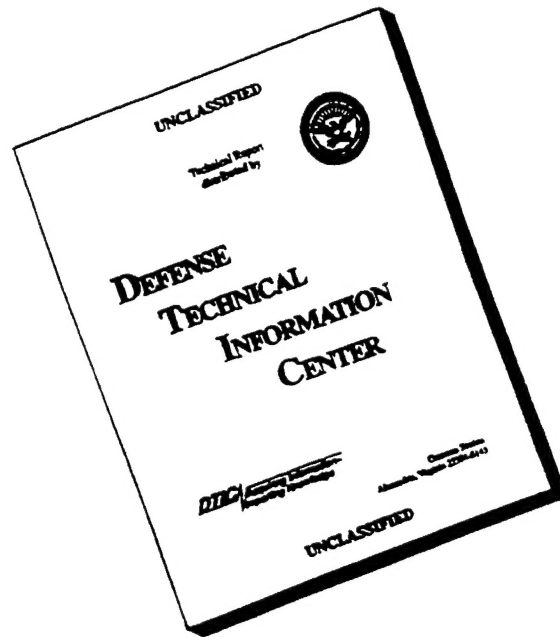
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Summary of Research

- Much of the previous work has treated hostage taking globally, as if it were a single type of terrorist activity. Our work indicates that while barricade-seige, aerial hijack and kidnap are all examples of hostage taking, they are conceptually and behaviourally distinct. While a general theoretical structure can be identified underlying all three, it is necessary to address each individually.
- A theoretical model structuring the behavioural components and the key non-behavioural context indicators has been developed. This model is sufficiently general to cover all three hostage taking strategies, yet allows event specific details to be included when considering each separately.
- Basic psychological principles have been taken as the starting point in considering a theoretical structure of hostage taking. All actions carried out are seen to be purposive, that is they occur in the pursuit of specific goals. Further, the actions carried out by each of the parties involved, terrorists, hostages and authorities, can be seen to follow from distinct rules and roles which are derived implicitly from the social and physical context of an event.
- Three databases have been developed, one for each hostage taking strategy under consideration. The barricade-seige database contains 81 cases, the aerial hijack database 100 cases and the kidnap database 101 cases. The smaller number of cases in the barricade-seige database reflects the lower incidence of such events relative to the other strategies.
- The development of the theoretical frameworks is iterative and is thus continuous with further research. The nature of the frameworks proposed is such that any research findings can be fed-back into them as necessary, allowing improvements in their sensitivity and reliability.
- The aim of the research following the establishment of the databases has been to indicate the feasibility of five principles of application of the data (outlined in chapter 2). Results detailed in the report indicate positive support for each of the principles.
- Having outlined the context and conceptual development of the behavioural databases, research on each of the five principles will be overviewed to indicate their empirical support. It is clear from the research to date that the principles are indeed supported.
- Future work will elaborate on these principles. A clear foundation has been established in terms of understanding the potential application of behavioural information. Having illustrated that the principles are supported it is now necessary to continue with more focused research into the precise nature of each principle.

MODELLING TERRORIST BEHAVIOR: DEVELOPING INVESTIGATIVE DECISION MAKING THROUGH THE ANALYSIS OF EMPIRICAL DATABASES

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MODELLING TERRORIST BEHAVIOR: DEVELOPING INVESTIGATIVE DECISION MAKING THROUGH THE ANALYSIS OF EMPIRICAL DATABASES

1 - INTRODUCTION: Developing an Understanding of Terrorist Hostage Taking

The broad aim of the project has been to understand the nature of behaviour during terrorist hostage taking events. This has been approached through the establishment of databases of kidnapping, barricade-siege and aerial hijacking. Following the creation of the databases the range and types of actions exhibited have been analysed through the use of multidimensional scaling techniques.

Work has been carried out on terrorist's activities by a number of agencies and much useful and important work has resulted, including the establishment of a number of valuable databases. However, one drawback of much of this work is that it has focused solely on factual information. For example, ITERATE III includes variables such as event date, event location, the name of the group(s) involved, the number of people involved, the type of event, the demands made and the outcomes for all parties involved, but not on the way hostages were treated, how the hostages were actually taken etc.

While factual information does facilitate an understanding of the broad patterns of terrorist activity in terms of who does what and with what result, it misses one central and potentially crucial sphere of information - the 'how' of such events. What is currently missing does not relate to what is done during hostage taking, but how such events are conducted. Questions such as "what are the types of hostage taking strategies available?" and "what is the range of action possible in an event?" cannot be addressed by analysis of purely factual databases. What is required is some way of approaching the patterns and interactions of the actions or behaviours displayed during such an event.

The current work aims to address terrorist hostage taking from this perspective. Taking investigative, environmental and social psychological knowledge as a theoretical basis the actions of all parties involved in terrorist hostage taking are considered with the aim of understanding the nature of the complex interactions of individuals and groups in such situations.

The findings of the project to date indicate very clearly that there is a consistent structure to the way in which terrorist hostage taking events are carried out, with consistent core actions defining the fundamental nature of an approach and a number of subsets of actions indicating differing types of strategy. Such information can be very useful to decision makers and negotiators, alongside the information already available to them, in aiding the most effective decisions to be made as rapidly as possible.

1.1 - Three Strategies of Hostage Taking

The review of the literature has revealed that whilst much has been written on terrorism in general, hostage taking has received relatively little attention. Those authors who have considered the nature of hostage taking, while acknowledging the three different strategies (eg Corsi 1981) usually base their analysis on the combined data for kidnap, hijacking and barricade-siege (eg Friedland and Merari 1992).

Whilst these three types of terrorist action have bargaining for hostages in common, they are clearly very different strategies. The present work holds that there are important differences between kidnap, hijack and barricade-siege which will influence the management and investigation of these crimes. However, more importantly, where behaviour is being used to draw inferences about the terrorists and the nature of the incident itself, it is necessary to identify the similarities and differences between the incidents which will affect the behavioural transaction between the terrorists, their hostages and the negotiating authorities.

Developing from Corsi's (1981) work it is possible to identify the main distinguishing features of the three forms of hostage taking. The table below shows the key variables which distinguish between the strategies in terms of the implications for management and investigation.

	<u>Numbers</u>	<u>Targeting</u>	<u>Location</u>	<u>Mobility</u>
1. Hijack (skyjack)	many	rare	known	mobile-fixed
2. Barricade-seige)	many	occasional	known	fixed
3. Kidnap	few	usual	unknown	mobile

This table shows that hijack and barricade siege incidents are similar in that they both typically involve a large number of hostages being held in a location known to the authorities. In barricade siege incidents this location is usually fixed, in that it is rare for the terrorists to successfully move the hostages once the target building has been taken. The location of hijackings are known even when they are mobile, as the terrorists are dependent on gaining permission to land at some stage. Although some hijackers are successful in refuelling the plane and changing the location of the incident, locations are known to the authorities. Almost all hijackings become fixed, known locations during the negotiation stage and are therefore very similar to sieges.

Kidnaps can be seen to be quite different in terms of their location. The terrorists have an advantage over the authorities in that they usually hold hostages in an unknown location and have the ability to move that location at any time during the incident. The challenge for the authorities is often to identify where the hostages are being held.

In incidents of kidnap, specific hostages are almost always targeted. In incidents of barricade-siege, it is sometimes the case that a specific individual or group of individuals will be targeted by their location in the building being taken. However, in hijackings, it is very rare for a plane to be taken because of specific passengers on board.

These different features clearly have implications for the negotiation process and the likely outcome. However they also predict distinct behavioural differences between those involved in each of the strategies. The number of hostages held will influence the way in which the terrorists maintain their control of the situation. For example, most hijackings require a few terrorists to control a large number of hostages. In kidnappings small numbers of hostages can be controlled easily and are usually outnumbered by the terrorists.

The three strategies require different types of planning and organisation on the terrorists part. Different types of information are required to achieve the aims of the incident in each case, and each will necessitate a different means of access to the hostages. Targeting specific hostages requires a different set of resources to incidents where hostages are taken at random. Hijackers are more likely to have explosive devices than other hostage takers. However, they are also more likely to be able to maintain control through threat alone and have the greatest incidence of hoaxes in terms of weaponry¹.

The different balance of power between the terrorists and the authorities in incidents of kidnap will influence the negotiation process. Similarly, the nature of the communication between hostage takers and authorities will be different where hostages are kept in known versus unknown locations.

In terms of outcome, the three strategies carry different risks for all the participants, and is therefore likely to be reflected in their behaviour. The increased stress of besieged incidents will doubtless affect the behaviour of the hostage takers. Terrorists must consider the likelihood of achieving their aims as well as how they will effect their own escape from the incident.

In consideration of these psychological differences, the current work aims to identify the structure of hostage taking behaviour in each of the three different terrorist strategies. Three separate data bases have been developed, considering the similarities and key differences in terrorist behaviour.

1.2 - The Approach Taken

A number of facets proposed to underlie terrorist behaviour have been derived from literature review and content analysis. The proposed inter-relations of these facets allows the generation of a behavioural framework. The framework is used to inform the categories included in data frames relating to each of the hostage taking strategies.

Data collated using these frameworks is analysed using non-metric multidimensional scaling techniques, able to deal with qualitative rather than quantitative information. The results of these analyses indicate the degree of support for the hypothesised models and where relevant the nature of any deviation from the frameworks proposed.

Databases have now been established for each of aerial hijack, kidnap and barricade-seige. An extensive search of the literature has been carried out, identifying the key issues and concepts (facets) with respect to hostage taking. Two conceptual frames were initially hypothesised, pertaining to: 1) event content and 2) event temporal sequence

These frameworks address different aspects of hostage taking events and were synthesised to give a unified framework with a high degree of discrimination of behavioural detail.

¹ Data drawn from Iterate III. Mickolus 1989.

The coding frameworks have been continually developed and refined throughout the coding process.

The data coding was carried out by two independent researchers. The inter-rater reliability was calculated from the resulting data. Where discrepancies between the raters occurred the event details were carefully reconsidered and a final code allocated. Work carried out on the aerial hijack data set indicated a general difference in the kinds of actions displayed by people carrying out such events for personal or for political reasons.

The graduation of actions from personal to organisational in orientation does not only hold true for the aerial hijack, similar results have also been found in analysis of the kidnap data. This is an extremely important discovery as it indicates that while the types of hostage taking may differ in terms of their specific content and detail, they share common underlying behavioural and psychological processes.

Having common psychological processes, common patterns can be found in the *nature* of the behaviours exhibited, even if the specific behaviours themselves differ. For example, the exact manner in which hostages are controlled by hijackers in an aircraft and kidnappers in a private house may differ, but their choice of control technique, from polite/kind through to violent/harsh treatment can be seen to be consistently associated with other aspects of their behaviour.

1.3 - Contributions and Applications

The work provides a new perspective on terrorism and understanding terrorist actions. While psychologists have made valuable contributions to the literature it has tended to focus on the motivations of the terrorists, interaction and communication throughout negotiation and the psychopathology of terrorists. Little attention has previously been paid to the nature and role of the actions exhibited by those involved and there are currently no available databases relating to this material. The current research shows that this is a profitable area of research and work to date indicates a number of potential applications for this type of data.

The continued development of principles for using behaviour in investigative and other situations, such as negotiation, can be seen to have significant implications for decision makers. The use of such information has been found to be beneficial in the investigation of sexual crimes in Britain and overseas and there is no reason to suggest that such information will not be equally valuable with respect to hostage taking situations. Information derived from consideration of the five principles shown in the following section will allow decision makers access to a great deal of information currently not available to them in any clearly structured way.

2 - AIMS OF PROJECT

As stated in the introduction above, the aim of the project has been to study the possibility of the use of behavioural information in understanding terrorist hostage taking. From this broad statement of intent a number of specific ways in which such data could be of use were identified. This resulted in the five principles for the application of behavioural data outlined below to be specified.

Principle 1 - Models of Offence Behaviour:

The first stage in the analysis of any data collected is to understand the implications of the structure of that data. Having systematically collated information on a number of events (in this case hostage takings) it is necessary to derive empirically a comprehension of the complex interrelationships between the items of data encoded. This facilitates the generation of theoretically based models of the actions carried out during such events. Such models form the underlying framework from which to approach the further principles.

Principle 2 - The Linking of Crimes:

It is an underlying tenet of the field of Investigative Psychology that behavioural consistency can be observed between the crimes carried out by an offender. Through the effects of a number of social psychological processes, notably small group dynamics, such consistency would be predicted between the hostage taking events of terrorist groups. It is hypothesised that such behavioural consistency results in the ability to link the events of such groups: groups can be objectively distinguished by qualitatively different features of their behaviour.

Principle 3 - Criminal Development:

It would be overly simplistic to suggest that the actions of a group were to remain statically consistent over any period of time. While general patterns of behavioural consistency are expected to be indicated, so too is development. There are a range of factors which produce variation in the nature of any given event. Having established 'core' patterns of behaviour in which a group is likely to be consistent it is also valuable to be able to identify ways in which they may have developed or varied their approach from event to event.

Current research on rape investigation has indicated that development is often 'directional' rather than random (Jack and Wilson, unpublished conference paper, 1994) and if the nature of a groups development can be established a greater understanding of later development may also be afforded.

Principle 4 - Relating Behaviour to Criminal History:

In criminal investigation it is constructive to be able to relate behavioural information to background characteristics of offenders. In terrorist events the identity of those involved is often suspected if not known and the important issues relate to prediction of responses to authority action and the resultant outcomes. If it were possible to identify the behavioural indices of escalation this would relate directly to issues of negotiation.

Principle 5 - Comparison with Past Cases:

Facets of behaviour identified in previous terrorist incidents can be compared with current investigations. This would allow decisions to be made as to what type of instigators might be involved, and the likely outcome of the incident based upon past experience. Information derived from consideration of the four principles and the patterns thus emergent in the behavioural databases can be of direct use to those involved in 'live' situations.

The work carried out to date on the above principles has clearly indicated the potential for the use of behavioural information in such a manner. The work thus far carried out has allowed each of these issues to be briefly addressed to assess their practical application. In all cases the results have been extremely encouraging. It is now necessary to conduct further detailed research in each of these areas in order to establish the nature of the rules and relationships underlying the behaviours exhibited during terrorist hostage taking so that practical applications can be outlined for use by negotiators during such a situation.

3 - A PLACE IN THE LITERATURE

As has been stated already, the research being carried out is the development of behavioural databases and elucidation of the underlying principles of terrorist hostage taking behaviour. It can be seen to address issues not previously covered in any detail in the existing literature on terrorism as reviewed by both Miller (1988) and Crenshaw (1992).

The range and depth of the published material on terrorism is enormous. The field is multi-disciplinary, with work being presented by sociologists, economists, historians, political scientists, psychologists and many others. There is much work with a general nature, such as conceptual and definitional theses on what terrorism is and is not, or where terrorism as a strategy fits into current thinking on warfare. On the other hand there is also a lot of more focused work, such as historical case studies of single terrorist movements or outlines of current counter-terror technology and target hardening principles.

In his review of terrorism literature Miller (1988) distinguishes broadly between 'traditional' and 'behaviourist' approaches. He states that the traditional approach tends to isolate small numbers of events or single cases so as to maximise the number of variables considered in understanding the outcomes of the events. The behaviourist approach, on the other hand, is characterised by the analysis of large numbers of cases with the aim of isolating the relationships between relatively fewer variables.

The emphasis of the two approaches is also considered to be different. Traditional approaches mainly aim to address the question of who the terrorists are, concentrating on background details of groups (who they are, their ideologies, their leaders and so on) and why they carry out the activities that they do. The behavioural emphasis, in contrast, aims to build models and theories explaining the actions carried out during events in a systematic and scientific manner.

Within the Traditional approach Miller further identifies two broad strands of work with different underlying emphases: Historical studies are accounts of the development of terrorist group activities in terms of their moral, ideological and geographical features over time and their reactions to the actions of the authorities. He states that "many of the descriptive and more popular writings blend reality, fiction and mystery into an entertaining story" (Miller 1988, p.66). Normative-Judicial/legal studies emphasise the aspects of terrorism with respect to law. The two main questions asked in this approach to terrorism are what the legal means of control, prevention and punishment of terrorists are and how effective they are in combatting international terrorism.

The Behaviourist literature is composed of work in three main areas, each with a different emphasis. These are the psychological studies, socio-economic studies and the public policy studies. They are characterised by the attempt to identify common themes for all terrorists and groups such that explanatory variables can be identified.

Psychological studies are reported to be generally characterised by the attempts to identify a "psychotic terrorist personality or profile". The underlying assumption is that terrorists

have some aspect (or aspects) of their psychological make up in common and that this (or these) can be identified. Emphasis is put on the development of terrorists, following a gradual progression from alienation, through protest, to full scale terrorism. An example of this can be seen in the work of Dutter (1987) on ethno-political activity. The psychological work focuses at the individual level, dealing with constructs such as aggression, social cohesion, group processes, prejudice, learning (through indoctrination) and psychopathology.

Socio-economic studies deal with the question of terrorism at a societal level, focusing on aspects such as the roots of conflict in a country or area and the nature of these conflicts. Many factors are included in analysis, such as economic, historical, cultural, demographic and technological aspects of the region in question. Miller states that, at least at the time of his review, much of the socio-economic work is speculative in nature.

Public policy studies tend to have a different general emphasis to the psychological and socio-economic ones. Where the approaches previously outlined attempt to examine the *causes* of terrorism, the public policy work focuses on the *solutions*, dealing with the dilemmas facing governments threatened by terrorism and the way in which they attempt to deal with them. The central question in public policy considerations is "what are the most effective policies for thwarting terrorism?" The concentration is on governmental reaction after an event with the ultimate aim of deterring future events.

The current work at the University of Surrey can be seen to be bridging the gap between the psychological and public policy areas as identified in Miller's review. Rather than focus specifically on background details of terrorists and the relation of these to their consequent actions or on the relationship of a group's actions to the authorities reactions, the current work attempts to address all of these issues and the manner in which they interrelate during the course of an event. Of central interest is the dialogue, both verbal and non-verbal, between all of the parties concerned.

The structure of the current work is such that the dynamics of a terrorist event can be modelled, allowing identification of the key behavioural facets of the different hostage taking types and the relation of these to the possible outcomes. The aim is not to 'understand' the terrorists themselves but to understand the dynamics of hostage taking events.

In her more recent review of the current research on terrorism, Crenshaw (1992), points out that a major problem in the work is the fundamental disagreement of basic definitions used. She states that the concept of political violence is problematic and that it is often used arbitrarily, while definitions of terrorism itself are often ambiguous and wide ranging. The current work aims to circumvent this problem by addressing itself at the level of human actions rather than a political level and as such should be free of political bias incurred through the selection of a particular definition of terrorism. If there are behavioural differences associated with political and non-political hostage taking then this, and their nature, will be highlighted.

Crenshaw (1992) indicates that many researchers disagree even on such fundamental matters as whether their work should focus on practical aspects or on theoretical areas

with respect to terrorism. One of the benefits of the current work is that the theoretical models of hostage taking generated can be used directly to feed information into decision making and policy formation.

In summarising her review of the role of terrorism within the context of political violence of all forms, she concludes that the field generally needs more precision and specification. She highlights a number of areas in which further work is necessary. The work of the University of Surrey can be seen to be addressing four of these areas:

(1) Studies should provide account of both instrumental and emotional motives for groups involved in terrorism. In dismissing the view that terrorism is pathological, the role of psychological factors and their relation to strategic rationales of terrorism should not be ignored.

The current work takes as a basic premise the purposiveness of behaviour, seeing it as being goal driven. By focusing on behaviour the research directly addresses the relation of psychological factors to strategic options available to all sides involved in a terrorist incident.

(2) Studies of conflict resolution should seek to place negotiation processes within the political process. Crenshaw poses two questions to be addressed when tackling this issue; can terrorism be reduced even when the underlying conflict of interests has not been resolved and when does terrorism end as a result of negotiation?

In basing the structure of the hostage taking databases on a model of terrorist behaviour it is possible for us to address these questions directly in analysis carried out. One of the prime aims of the current work is to indicate the relationships between all of the activities occurring during an event and the eventual outcomes.

(3) There should be greater awareness of the heterogeneity of terrorist behaviour. Effort should be placed on developing explanations of categories of violence rather than global theories. Crenshaw (1992) states that analyses combining disparate activities can only serve to confuse results. it may not be possible to speak of terrorism as a homogenous category.

This factor is one of fundamental importance. It is referring not to particular aspects of terrorism research to be considered but the entire manner in which the research is carried out. The current work does not assume terrorist events to be homogenous. While the general theoretical structure underlying the hostage taking databases is drawn out from commonalities in behaviours exhibited in barricade-seige, aerial hijack and kidnap, the idiosyncrasies and event specific activities of each are recognised with the result that three distinct yet comparable databases are being worked with, not one large common database.

(4) The interactions of all concerned parties, not the strategies of one side or the other, should be analysed. Merkl (in Crenshaw, 1992) notes that there is a process of mutual reinforcement and escalation that is common to all political violence around the world.

Again the current work aims to address this issue directly. One of the basic aims of the research being carried out is to understand how the actions of all parties interact and what the resulting effects and ultimate outcomes of these interactions are. Hostage taking events are understood to be complex and multidimensional in nature. It is of little value to consider the actions of just the hostage takers or just the authorities as if they were acting in a vacuum. The actions of each side will, to an extent, be governed by the actions of the other as they set the context within which any following actions (physical or verbal) are made.

In summary, the work being carried out at the University of Surrey can be seen to be addressing issues which have been identified as important by other researchers in the field. A number of important areas with both theoretical and practical implications are being addressed simultaneously by the work. Further sections of this report will outline in detail the scope and exact nature of the work and it's progress to date.

4 - THE PSYCHOLOGY OF TERRORISM

Up to this point the report has discussed the place of the current work within the context of the work on terrorism and hostage taking in general. The following sections will outline in detail the way in which the current checklists and their underlying theoretical framework are structured, thus illustrating how they are able to assimilate continual developments without requiring any radical alterations to their overall form.

Many authors have stressed that content analysis is not simply a matter of 'counting things' but that all classification should be seen as a process of theory development and hypothesis testing (Krippendorff 1980). In developing the classification scheme for hostage taking events it has been necessary to consider the meaning of behaviour in terrorist incidents. The coding frameworks have been developed in relation to a psychological interpretation of hostage taking incidents. The following section outlines some of the background, theoretical issues which have been the basis for a psychological assessment of behaviour in terrorist incidents.

4.1 - Social and Environmental Context

Although the present work is primarily concerned with behaviour, it is important that behaviour be seen in its environmental and social context. Over the last two decades social psychologists have come to acknowledge that behaviour cannot be viewed independently of a complex system of social and environmental interactions.

It is therefore important to understand how the environment and the social rules of a situation shape people's behaviour. In terms of hostage taking incidents, contextual information should be considered, such as the location of the incident and the time scale over which it takes place. It must be acknowledged that these context facets will influence the behaviour of all those involved.

This complex interaction has further methodological implications for the study of behaviour. Behaviours do not exist in isolation, they are interdependent, and as such their study requires a multivariate approach. Previous authors have examined single features of hostage taking incidents, rather than looking for patterns of behaviour (eg Friedland and Merari 1992). It is unlikely that outcome can be predicted from single unrelated variables. The current work is therefore directed towards developing an understanding of the behaviours associated with hostage taking and their co-occurrence within the social and environmental context.

Taking a social psychological framework requires that variables should be identified which will contribute to an understanding of the goals and expectations of the people involved. It is therefore appropriate to consider hostage taking as a social interaction, which is guided by a series of roles, and associated rules.

4.2 - Roles and Rules

Like any social situation, the hostage taking arena appears to have specific roles and rules for social interaction which are followed by all the participants. Donald and Canter (1990; 1992) and Donald (1992; 1993) have shown that even under life threatening circumstances people follow the social rules prescribed by their role in the situation.

It is very rare for these rules to be broken, even when people are under considerable stress, and it is of particular interest when they are. Variables are included in the classification schemes which consider these breaches of behavioural rules.

On the part of the terrorists, 'bluffing' is one of these classifications and examples include hostage takers' claims to have specific hostages or to have wired the building with explosives when they have not. Tricks on the behalf of the authorities are also rare, but most frequently occur where money is to be transferred. In some hijackings disguised security forces may be introduced onto the plane. Terrorists have also been led to believe that they are landing at a different airport. For example, it was hoped that terrorists from the Japanese United Red Army would be fooled by an attempt to disguise a South Korean airport as North Korean (31.3.70).

Rule breaking by all parties has potentially serious results. When rule breaking is identified by either party it is likely to result in the breakdown of the whole negotiation process and this strategy should certainly be viewed with caution by the authorities. Hostage takers who break the rules may be deemed 'unnegotiable' and may be stormed, and authorities whose plans backfire may result in deaths of hostages.

Interestingly, the hostages also have clear social roles in the incident. They are expected to be passive victims and hostages who put up resistance to the terrorists are often injured, if not killed. The hostages themselves will expect other hostages to play their role. Under the broad description of the Stockholm Syndrome (see, for example, Turner 1985), it has been suggested that an individual who attempts to subvert the terrorists plans will be alienated from the other hostages, and it has been known for any retaliatory action to be described as justified by the other hostages. This was evident in the London Embassy Siege (30.4.80).

These examples illustrate what happens when the rules are broken. However these activities are rare and on the whole the participants act out quite a predictable pattern of interaction concerning the negotiation process.

4.3 - The Demands Made

There has been much concern in the academic literature with the nature of the demands made by terrorist organisations who take hostages. The majority of this work has considered the nature of demands made as part of the process of negotiation and have been based on economic bargaining and decision making models (eg Sandler and Scott 1987).

However, as Mickolus (1987) warns, the demands made may not accurately reflect the actual aims of the terrorists in terms of their overall strategy. One might lose the battle in as much as not receiving the explicit demands, but win the war, with the resultant publicity. Indeed, some authors assert that the primary aim of hostage taking acts such as hijack and barricade siege are based on the publicity they attract, bringing 'real life soap operas' into the home through television coverage (Rubin and Friedland 1986).

A common response to the problem of not knowing the strategic aims of the terrorists is to suggest that terrorists be interviewed about their real goals in carrying out such an attack. When dealing with other types of 'criminal' activity this approach has been criticised as lacking validity. In the US serial murders have become famous through this process and there is some debate about the validity of their accounts.

The actual demands made by terrorists during the incident should not be dismissed so quickly. Whilst it is not possible to know what the terrorists hope to achieve in the long term, there may be something to learn from what they actually say. If the terrorist are so controlled and controlling in terms of their relationship with the media, then it stands to reason that there will be a structure in what they say and do to present the image of their actions. It can thus be hypothesised that far from being random, the types of demands made in hostage taking incidents reveal a lot about the organisation and its aims.

For example, requests for the release of specific prisoners can be characterised as strategic demands. Frequently the demand is for the release of colleagues who have been captured on previous missions. Whilst one might consider this to be loyalty, it would make more sense to consider that the aim is to bring experienced and valued operators back into the organisation. This is therefore considered to be a specific and strategic move on the part of the terrorist.

On the other hand the demand for the release of a broad category of prisoners is more of a global statement of injustice rather than a strategic move. Since it is unlikely that large numbers of unspecified prisoners will be released, this demand is better characterised as a global statement, rather than an actual possibility for improving the personnel of the organisation.

4.4 - Give and Take: Negotiation Rules

Negotiation has been characterised in two ways. Economists and probability theorists have cast the interaction within a bargaining framework (eg Sandler and Scott (1987), Corsi 1981). On the other hand authors such as Friedland and Merari (1992) have suggested that far from being amenable to bargaining rules, hostage taking is better viewed as a game of brinkmanship, where concessions are rarely granted by either party and the 'winner takes all'. Sometimes the terrorists' demands will be met: certain governments will capitulate to terrorists' demands. However, in many cases the terrorists will have none of their demands met, being overpowered in a violent ending, or surrendering to the authorities.

However, rather than focusing on the eventual outcomes it is interesting to consider the process itself. Contrary to Friedland and Merari's stance it seems that quite often concessions are granted by both parties. The rules of hostage taking require that both parties show a willingness to enter into the negotiation process. Cases where this does not happen to some extent are very rare. The coding scheme takes them into account where governments make an explicit statement that they will not negotiate with the terrorists. This is a dangerous strategy from the government's point of view because they may risk the public's support by appearing not to care about the hostages.

One way in which the government can make concessions to the hostages without actually giving in to their demands is through offering the 'Bangkok Solution'. The Bangkok Solution was so coined following a hijacking which ended in Bangkok, and the release of the hostages was secured through the promise of 'safe passage' from the incident for the terrorists. This can be a successful solution to hostage taking incidents as the government are seen not to have surrendered to the terrorists demands, but not to have endangered the lives of the hostages.

On the part of the hostage takers there are certain concessions which are usual within the 'rules' of bargaining. The hostage takers are required to show Negotiability. The demands made may be lessened, deadlines are often extended, and above all hostages should be released.

4.5 - Hostage-Taking Currency

When hostages are taken terrorist have acquired a currency with which to bargain. In kidnapping incidents this currency is the hostages themselves who are almost always kept at an unknown location. However in siege and hijack incidents two forms of currency are involved, people and property.

Whilst most attention is focused on the hostages, in many cases property is also used in the bargaining process. For example, in the 1970's the PFLP used hijacked aircraft as their primary currency, removing hostages from the scene and destroying the planes themselves, causing many millions of dollars damage (eg 29.8.69; 6.9.70; 20.7.73). Deliberate or threatened damage to the aircraft shows a different strategy from the currency focus on the passengers themselves. Similarly in barricade-siege incidents, the building itself may be wired with explosives. Sometimes this is done as part of the threat to kill the hostages, but part of the threat involves the building itself.

When the hostages are the currency there appear to be a number of expectations of the terrorists. First, it is expected that some hostages will be kept. Pilot work has shown that badly organised, personally motivated hijackings often result in the release of all the hostages on arrival at an airport (Wilson and Canter 1992). Whilst this may be considered as 'property as currency', it most often is not. These hijackers rarely have the means to destroy the plane. Sometimes personal hijacks are designed simply to facilitate the terrorists travel to a certain destination and so on arrival the hostages may be perceived as redundant. However, in terms of securing escape or acceptance in the country they are

still valuable negotiating currency. The release of all the hostages therefore shows the least sophistication, giving up the primary currency immediately.

On the other hand, keeping all the hostages is also a 'poor' strategy. The rules of the exchange require that certain hostages are released, and that more hostages will be released at different stages of the negotiation process.

Rubin and Friedland (1986) have emphasised that hostage taking incidents are played out on the stage of mass media and that in a sophisticated operation every move is coordinated for the best publicity possible. 'Good publicity' requires that some hostages are released immediately. For example, experienced political hijackers will usually release women and children, elderly passengers, the sick, and in some cases nationalities with whom they have no grievance. Similarly in well planned barricade-siege incidents, although target people (eg high ranking officials, ambassadors) will be amongst the hostages taken, it is rare for all non-targets to be released immediately. Although women, children and local support staff may be released shortly after take over, some non targets may be kept for gradual release as part of the give and take of negotiation.

Release on compassionate grounds may be viewed as a humanitarian gesture and allowing medical attention to the injured would also suggest terrorists with an interest in 'good publicity'. In the siege of the OPEC meeting in Vienna in 1975, (21.12.75) the female support staff were 'allowed to leave to do their Christmas Shopping' (Mickolus 1980 p572).

4.6 - Resources

Typically resources are taken to be the physical things which the terrorists have available to them. The level of weaponry is certainly an indication of the amount of background resources the group has and the amount of planning that went into the incident. However, resources also concern people and information. The number of people in the task force and their level of training is also a resource. The information they have can be assessed in terms of the success of their targeting. For example, if a specific individual is targeted in a kidnap or in an embassy siege, the knowledge of where they will be and when is crucial. Information about procedures can be vital to successful takeover, for example, in those cases where tricks are employed, or buildings are taken through part of an established procedure. An example of such resources would be when two terrorists walked into a party at the Israeli embassy in Bangkok dressed in white tie and tails, capturing a number of important diplomats (28.12.72).

Information is a crucial resource to hostage takers who adopt kidnap. In order to get a specific individual information is necessary regarding their usual movements. It is for this reason that officials vary their daily routines.

However, when information is wrong, it is of great interest to see what the terrorists do. For example, when the desired target is not present in a building the terrorists will usually take hostages anyway. Obviously, the hostage taking strategy is an important factor. In barricade-siege it would be difficult for the terrorists to escape, and holding

some hostages may be worthwhile, whereas in a kidnap attempt it would seem more logical to abandon the plan rather than take the driver, for example.

The data base contains examples of incidents which are successful at many different levels. It is important to examine the terrorists reactions when plans go wrong. For example, in the hijacking of a JAL flight (20.7.73), one of the terrorists accidentally set off a grenade and killed herself. In the absence of this leader the rest of the group did not have the information they needed to continue the mission. Similarly, in the hijacking of a El Al flight (7.9.70) two of the four man team failed to board the flight, and grenades used by the terrorists were found to be faulty. This type of incident tells us a lot about the organisation and training of the terrorists involved, as well as the preparedness of the other terrorists to undertake the mission.

4.7 - The Nature of Control

The study of behaviour in a number of different crimes has suggested a universal underlying distinction between crimes that are spontaneous and emotional, and crimes that are planned and well organised (Canter 1994). Hostage taking is no exception, and pilot work has already identified this distinction in hijackings (Wilson and Canter 1992). Whilst this distinction can most obviously be seen in the degree of planning required to undertake the particular incident, and the amount of resources upon which the terrorists draw, it is also interesting to consider the terrorists behaviour with respect to the other players in the incident.

For example, when a building is taken over, the terrorists must assert their control over the situation. It is possible to do this through three different strategies. First it is possible to do actual physical harm, for example by shooting the guards. The act of injuring or killing people in the initial take over indicates the terrorists' preparedness to kill and creates the fear they need for control.

However, as discussed earlier, it also labels them as dangerous and unnegotiable. This may not only have an adverse effect on the sympathy of the public for their cause, but also on the subsequent actions of the authorities. Rubin and Friedland (1986) hold that a successful incident will not involve casualties of any kind. A similar display of serious intent can be achieved without casualties, through firing guns but away from people. Finally, some hostage takers are able to assert their control over the situation without actually using their weapons at all. The strategies adopted will be influenced by the situation itself, for example, the number of people in the terrorist force, the number of hostages being controlled and the nature of the building taken. It is for this reason that all behaviour in terrorist incidents must be studied multivariately.

Whilst it is interesting to consider the terrorists response to the intervention of the authorities, it is important to distinguish between the terrorist response at different stages of the hostage taking incident. Primary Intervention is the attempt to thwart the initial take-over, and may result in the killing of guards for example. Secondary Intervention refers to any attempts by the hostages to overpower the terrorists, and Official Intervention is the attempts made by the authorities to end the incident. At each of these

stages the response of the terrorist is likely to be different, and the analysis must be sensitive enough to account for the influence of different temporal stages of the incident.

Whilst the type of initial takeover and the response of the terrorists to intervention is an important index of the nature of their control, it is also important to consider the way in which the hostages are manipulated. The way in which hostages are treated has a great impact on the way the authorities and the public perceive the terrorists and their cause. It is therefore important from the terrorists point of view to maintain control without ill treatment of the hostages. It can be hypothesised that mental and physical abuse of the hostages are likely to be associated with poorly organised groups, and the more spontaneous or emotional incidents. The way in which hostages are actually controlled, whether physically tied, or restrained through threat alone is important. Again the context of the incident must be considered since the number of hostages taken, whilst in the control of the hostage takers themselves, will have an impact on the way they need to control their subsequent behaviour.

4.8 - Summary of Behavioural Considerations

The review of the psychological basis for the development of the coding schemes has illustrated that rather than simply counting features of the incidents the analysis has some basic hypotheses regarding the nature of hostage taking incidents. The review has indicated that there are likely to be similarities and differences between behaviour in the three strategies of hostage taking. The coding schemes therefore contain some overlap between the behaviours studied in each context, as well as important differences which distinguish between the three strategies.

The preliminary schemes for each of the three hostage taking strategies are contained in Appendices A, B, and C. It should be stressed that the schemes are part of a continual process of revision and development and should therefore be considered only as working versions at the present time.

5 - CONCEPTUAL DEVELOPMENT OF A DATABASE

Taking account of the current literature, a system of conceptual aspects, or facets, was developed to allow the generation of a theoretical structure which would be able to cover all hostage taking events, but which would still be sensitive to the nature of the differences between the different types.

Given the wide range of terrorist acts possible and the consequent number of behaviours which could be exhibited the area of consideration was constrained to hostage taking events alone. The events to be included were identified as being cases of kidnapping, barricade-seige and aerial hijacking. Unlike terrorism, hostage taking as a strategy is relatively simple and unequivocal to define, being the taking and holding of one or more hostages for the purpose of putting a third party into a difficult (negotiating) position.

The taking of hostages is important because it forces governments (or other third parties) to choose between the responsibility for the welfare of life and the duty to uphold principles (Friedland and Merari, 1992). Further, it is of interest psychologically as there is usually information relating to the actions of the parties concerned which is not available in more 'impersonal' acts such as assassinations or bombings.

It is recognised that a number of the hostage taking events will be questionable as to whether they can be classed as being purely terrorist or not. This would depend greatly upon whose definition of terrorism is being used. However, if 'terrorist' events are substantively different behaviourally from 'non-terrorist' events it would be expected that this would be indicated in analysis of these events. If differences are indeed indicated, it would also allow the identification of the key aspects in which they differ, allowing more theory based definitions of terrorist to be generated.

Three major areas of consideration were identified as central in the examination of any hostage taking event. These are (i) the temporal frame, (ii) the terrorist factors and (iii) the authority factors. These three areas are very closely interrelated but can be identified as being conceptually distinct. The following sections outline each of these three areas.

5.1 - A Temporal Frame:

A hostage taking event has a number of very clear temporal stages. The relative duration of each of these stages may vary from event to event and between event types, but the stages always follow in the same logical sequence. Miller (1988) identifies five stages in a terrorist attack; 1) conceptualisation and planning, 2) attack, 3) the event in progress, 4) the event termination and 5) the aftermath. These broadly cover every stage of a hostage taking event, but in terms of understanding the behaviours in an event not all of these stages are meaningful.

Stage 1 - conceptualisation and planning:

This stage refers to the prior planning that the terrorists carry out before an event. However, it is almost impossible to gain any impression of the nature and extent of

a hostage takers pre-event planning. By its very nature the planning is clandestine. If the details of the planning were to become apparent before the event it would be relatively simple to prevent it. Further, any details which do become available suffer from being sketchy and post-hoc. For these reasons this stage cannot be used in the current behavioural frameworks.

This type of information would be of great value in the extension of the frameworks being developed as it would allow useful insights into such psychological areas as practical goal setting, decision making and role specification with respect to tactical and strategic sophistication on the part of the hostage takers.

Stage 2 - the attack or event initiation:

The initiation is the phase of the event in which the terrorists first make their presence known. In terms of actions and behaviours this is the first phase in which information relating to the hostage taking is available. It is conceptually distinct from the remainder of the event. In all types of hostage taking, be it kidnap, hijack or barricade-seige, there are a number of distinct strategies which can be employed in the initiation of an event. These are quite distinct from, and impose no logical limitations on, the possible range of actions characterising the remainder of the event.

However, given that the event initiation imposes no limitations on the following stages of an event, it is not necessarily the case that there is no link between the strategies employed at each by the terrorists. Intuitively it makes sense to suggest that a group carrying out a violent initiation are more likely to use violence in the following stages of an event. It must be stressed, however, that this need not be the case in reality. For example, in a number of kidnaps with violent initiations, resulting in the death of body guards and bystanders, the hostages were then treated courteously during the holding phase. By structuring the coding frames in this way it is possible to test the nature of this behavioural relationship empirically.

Stage 3 - the event in progress or holding stage:

It is the holding phase which is commonly recognised as being characteristic of an event. In all types of hostage taking it is the physical holding of the hostage(s) in either a known or unknown location which is synonymous with the event. This also tends to be the longest stage in duration and the stage in which the widest range of options and greatest variation in possible actions is exhibited. It differs distinctly from the initiation as it concerns events which occur once the terrorists have succeeded in securing their targets.

In addition to the wide differences in actions exhibited by the terrorists themselves, the analysis of such events is further complicated by the influence of both the hostages and outside parties (typically, but not exclusively, the authorities). The hostages themselves have limited room for involvement in an episode, though it is not

great given the importance of the actions of the other parties. The major influence of other parties is through involvement in, or refusal of, negotiations.

There are a wide range of possible negotiation strategies open to the authorities (and other parties), ranging from refusal to alter a stated position through to complete capitulation. Similarly the terrorists have a wide range of potential responses from giving themselves up to increasing their demands. While there is much rhetoric and opinion as to the best strategy to dealing with terrorists in these situations, and a great deal of experience in both the military and the police in negotiating, it is still not clear what the relative merits and implications of the various strategies are. The structure of the current database allows this interaction to be studied with respect to the context of the entire event, not just with reference to the eventual outcomes.

Stages 4 - the event termination, and 5 - the aftermath

While these are distinguished by Miller, they cannot be in behavioural terms. The manner of the event closure has direct bearing on the immediate aftermath and cannot be separated. Behaviourally speaking the aftermath refers to the immediate outcomes for the parties involved in the event, not to the effects on policy or legislation as a result of the event. The range of possible closure is as wide as the range of initiation or hostage holding strategies. What is of importance is the relation of the actions carried out at all previous stages of the event to the eventual closure.

If actions, or types of action, can be identified as commonly being associated with certain outcomes then it may be possible to predict the eventual outcome of another event based upon a knowledge of the actions which have already occurred. Further, if the effect of specific actions on the progress of an event is known it may be possible to 'shape' events to reduce or minimise the potential resulting impact.

5.2 - The Terrorist Factors

A number of key aspects have been identified as being of importance in the consideration of a hostage taking event with respect to the terrorists themselves. These are: (a) resources, (b) planning, (c) motives, (d) rationality and (e) control.

5.2.a - Resources

The resources available to, and utilised by, a terrorist group are very important in the consideration of their intent and potential. These need not necessarily be material assets. This facet covers weapons, vehicles, safe houses and other equipment, but in addition it also valuable to consider features such as information, skills, experience, available finance and manpower as resources.

Well established terrorist groups are likely to be well resourced. They will have large pools of available manpower, well accounted organisational funds, a number of safe houses and 'organisational buildings' as well as having access to sophisticated military and civil technology. In addition, they will have within their ranks a great deal of experience, a wide range of skills and access to a relatively large information network.

In contrast, an 'amateur' group, or non-affiliated terrorists will be relatively under-resourced. They are less likely to have organisational funds and will have less access to weapons and information. This is likely to have further effect in the level of planning and the degree of sophistication displayed during an event by such people.

5.2.b - Planning

Planning is a very important aspect as far as the psychological make-up of an event is concerned. Planning relates to all aspects of an event such as the provision and use of materials, the selection of a location and/or target, use of information, allocation of manpower, the demands to be made and the provision of contingency plans should events not turn out as expected.

As was stated for the resources, the level and sophistication of planning will reflect the nature of the terrorists involved; well planned events being more likely to be carried out by large established organisations, less well planned ones being carried out by small and/or new groups and 'one-off' terrorists.

Planning is likely to be most central in pre-event stages of an incident and as was stated in discussing the temporal frame, this is the stage in which little or no behavioural data is available. However, while specific details of planning are not likely to be available, an idea of the planning and sophistication of a group can often be inferred from the event details.

5.2.c - Motives

As with the planning, it is very hard to ascertain the precise nature of the motives. Terrorists may have many and complex reasons and rationale for carrying out a hostage taking event. However, it is possible to gain a degree of information from the actions carried out during an event. For example, the nature and extent of the demands made may give an idea of motives. A group demanding money alone is more likely to be personally and financially motivated than a group demanding the release of comrades from prison and social reforms, who are more likely to be politically oriented.

Similarly, the nature of the target may give an indication of the motives. The selection of a company director or banker implies extortion rather than political gain whereas the taking of a government official or a foreign national applies more politically directed emphasis on the attack.

Another potential indicator is the use of the media. Groups making direct use of the media, either as a communication channel or to get a manifesto or statement published are likely to be more politically motivated than a group who pay no special interest in their message being transmitted to others. However, the use of media is not as clear cut as this would imply as hostage taking by its nature secures a fairly good level of media attention.

5.2.d - Rationality

Again, this aspect is hard to study directly, but it can be implied from case details. Rationality refers to the realism of the terrorist and can be identified through a number of actions. Totally irrational acts are not normally classed as terrorism. For example, the case of a terrorist hijacking a plane to its intended destination (from JFK to Dulles airports) is considered the act of a mentally disturbed person rather than a terrorist.

It is possible, however, for terrorists to display more or less rationality while still remaining within a range of behaviour deemed 'normal'. A group of terrorists holding a government official and demanding the release of two prisoners and the publication of a manifesto is clearly being more rational in their demands than a similar group demanding the release of all political prisoners, \$60 million and food and clothing to all the homeless in a district.

Rationality can also be indicated by actions carried out during an event. The total changing of the demands or the unprovoked increase in the scale of the demands may indicate irrationality, as may a determination not to talk with certain negotiators or the setting of unattainable deadlines.

5.2.e - Control

Control is one of the most accessible aspects of terrorist behaviour. It can be seen to relate to three central areas; personal control, internal event control and external control. Personal control can be identified directly through reports of the terrorist's behaviour. Their apparent coolness and their reactions to the actions of others are good indicators of personal control.

Greater personal control may be expressed in terms of confidence, unhurriedness, spontaneous violence (rather than reactive violence) where less personal control is more likely to be characterised by nervousness, hurried actions or violence in response to others actions. It would be expected that the more sophisticated, better planned, more experienced and more committed groups will exhibit more self/personal control. Despite their apparent determination this may result in them being easier to deal with than a nervous and uncertain group.

Internal control refers to the terrorists handling of the hostage taking and holding itself. It is clearly interrelated with personal control but is distinct. Internal control covers aspects such as the manner in which the hostages are treated, initially in the hostage taking but also throughout their captivity. There are a wide range of hostage control strategies, from the killing of selected hostages to instil fear in the remainder through to genial, almost 'house guest'-like treatment.

External control refers to the way in which the terrorists relate to the authorities and other external parties. It is principally exhibited in the setting of deadlines, the nature of threats made and their role and actions during negotiations.

5.3 - Authority Factors

The actions of the authorities (and other concerned parties) have less direct impact on an event than those of the terrorists themselves. In most situations it is the actions of the hostage takers which directly shape the event, outside parties having a more reactive role. Usually the hostage takers attempt to reduce the role of external parties to giving concessions, granting the demands, and no more. The authorities are largely limited to damage limitation.

It is clear, however, that the actions of the external parties, particularly the authorities, are of great significance. External parties can choose whether to enter negotiations at all. If they choose not to enter a dialogue the control of the event is put back into the hands of the terrorists. If negotiations are entered into it may be possible to move the situation to one in which the potential impact of the terrorists is minimised.

If the authorities know the location of the hostage takers, as is the case in barricade-seige and hijack and may be the case in kidnappings if internal security searches are successful, they can also opt to force an ending. This is typically only used as a last resort and can result in deaths on all sides; terrorist, hostage and storming force. The nature and range of responses available to authorities also relates to their official policy towards terrorist action.

5.4 - The Overall Framework

Combining the terrorist and the authority controlled factors with the temporal frame a general framework of behaviour during a kidnapping can be developed. From this framework a checklist of possible actions was generated - each action being coded as to it's presence or absence.

Each of the factors pertaining to the terrorists and the authorities has been considered in terms of it's role and scope at each stage of the temporal frame. The working checklists are composed of a number of facets structured in sub-groups according to the phase of the event they relate to. For example *initiation control* is treated as a separate facet to *holding control* in order to allow examination of the relationship between initiation strategies and holding strategies.

In addition to the aspects discussed so far, a number of background items are included to give some factual data on the context of the event. These items cover the number of terrorists and hostages involved, the roles or jobs of the hostages, the country and specific location of an event and the overall duration of the event.

The following outline proforma illustrates the general considerations for each section of the checklists based upon the temporal structure and the terrorist and authority factors discussed above:

The Conceptual Framework

1) Background

Event type
Terrorist Group - named/unknown
 - numbers
Hostage group - nationality
 - role
 - numbers
Country event occurs in
Duration of event

2) Initiation

Targeting of hostage
Initiation strategy
Control exhibited in initiation
Evident resources
Hostage action during initiation
Location of initiation

3) Hostage Holding

Control exhibited during holding phase
Demands issued
Resources available
Negotiation
Hostage release
Establishing intent
Threats
Apparent Motivation
Hostage action

4) Closure/Outcome

Closure type
Outcome for - terrorists
 - hostages
 - authorities

6 - AN OVERVIEW OF THE DATABASES

The following sections detail basic aspects of the databases, including their sources, sizes and the reliability of the categories from which they are composed.

6.1 - Sources of Data

The current work is being carried out on publically available material. The works of Mickolus et al (1980, 1989) were found to be a very important source of information, covering all types terrorist incidents up to the late 80's. A large proportion of the information on barricade-seige, aerial hijack and kidnaps between 1968 and 1987 was taken from this source.

In addition to the Mickolus chronologies, literature searches were carried out on a number of quality British newspapers. The papers included in the review were The Times, the Guardian, The Independent and The Daily Telegraph. These are available on CD-ROM and all available years up to and including 1993 were searched in order to find new cases with which to extend the databases and where possible to add information to events already identified.

The original information can be seen to be comprised of textual accounts of events, based mainly on press reports of the same events. These accounts are carefully read and coded using the coding frames developed in order to build up the behavioural databases used in the analysis carried out.

There are, however, two problems associated with this source of data. The first is that the media tend to focus on the issues surrounding and the broad nature of an event rather than outlining in any detail the specific actions of the various actors in the incident. The second problem is the public nature of the data source. The media are not generally able to gain access to the terrorists to get pre-event information on matters such as planning or resourcing and they are generally not privy to the negotiation process so more behavioural information on the precise nature of the terrorist-hostage-authority interactions is also lost.

However, despite these limitations, it must be stressed that we are still able to learn a great deal from the information that we have. Pilot work has indicated consistencies within the behavioural structure of hostage taking events and the current checklists are more sophisticated than those initially used, taking into account a wider range of variables.

6.2 - Details of the Databases

There are currently three behavioural databases, one for each of the three different types of hostage taking being considered; aerial hijack, kidnap and barricade-seige. The number of events and data categories comprising each of the databases are indicated below:

Aerial Hijack -	100	(54 categories)
Kidnap -	101	(115 categories)
Barricade-Seige -	80	(55 categories)

It can be seen that the barricade-seige database is smaller than those of the other hostage taking strategies. This is a direct reflection of the relatively lower incidence of such events. The category number for each database indicates the number of 'fields' of information held for each event.

The larger number of categories in the kidnap database is the result of conceptual developments made during the initial work with the hijack and seige pilot work. The increased number of categories indicates a greater degree of specificity in dealing with each of the aspects, rather than an increase in the range of details covered. In practice the working number of categories for the kidnap database is more similar to those of the other databases due to the extremely low incidence of some of the actions represented in the expanded category set.

6.3 - Inter-Rater Reliability

The systematic and logical formation of the checklists is very important, however, once they have been developed it is essential to ensure that they are reliable. The reliability of the checklist refers to it's consistency and stability in use. If a checklist is used to code a hostage taking event more than once, will the same or similar results be yielded? It is essential that the checklists be reliable so that data generated represents variations in the hostage taking events themselves, not the idiosyncrasies of individual analysts.

All of the data coded at the University of Surrey has been coded independently by two coders. This is for two reasons; firstly to assess the inter-rater reliability and secondly to allow identification of any aspects of the checklists which may be problematic.

The Inter-Rater Reliability (IRR) of the checklist coding can be carried out by comparing the data generated by each of the coders. Every discrepancy in the codes given by the raters is marked. By dividing the number of discrepancies by the total number of data items coded a figure indicating the percentage error can be calculated:

$$\frac{\text{No. of Errors}}{\text{No. of Cells}} = \% \text{ Error}$$

The converse of this figure is the percentage of correspondence, a measure of reliability. The hostage taking checklists currently have an IRR in the region of 80 to 90%.

Looking at the patterns in the coding discrepancies it is possible to distinguish items or groups of items which seem prone to variation. These items are then carefully examined to ascertain the nature of the problem or ambiguity. Every discrepancy in the coding is checked against the original text source and a decision is made as to the appropriate code, which is used in the final dataset. This is a very time consuming exercise but it does ensure that the data used is triple checked for accuracy before any analysis is carried out.

Any problems identified in the analysis of the discrepancies is fed back into the design of the coding frame. In this way the development of the coding frames is iterative. If problems are found it is a simple task to identify what part of the theoretical structure and ambiguity lies and from there to make changes to the checklists in order to improve the nature of the data. This process ensures that the checklists are continually 'evolving' as the conceptual model of hostage taking behaviour becomes more complex.

7 - MODELS OF OFFENCE BEHAVIOUR

The first of the five principles outlined in the aims of the project (section 2) is the development of models of offense behaviour. As was stated, the first stage in understanding the activities carried out during any event is the development of models of that behaviour based upon empirical data. Analyses looking at behaviour in hostage taking will be considered in the following sections, modelling different aspects of terrorist behaviour.

The first analysis to be discussed was carried out on a large subsample of the kidnap data, including background variables relating to the region of the world in which the events occurred and which groups of people were involved. The purpose of this analysis was to see if there were any consistent geographical and socio-political variations in the execution of a kidnapping.

The second analysis included a smaller subset of behavioural categories, relating solely to the terrorist's actions. The purpose of this analysis was to develop an understanding of the processes in operation within the control of the terrorists themselves during an event.

7.1 - An Exploration of Socio-Political Variation in Kidnap

Ninety three categories were selected for use in this analysis. The selection was based upon the categories relevance and their frequency. Items with frequencies of less than 10% were not included. A non-metric multidimensional scaling technique known as Smallest Space Analysis (SSA) was used to analyse the categories thus selected.

In SSA each checklist item (in this case an action or background variable) is associated with every other item using Jaccard's coefficient of association. This produces a matrix of association coefficients indicating the level of co-occurrence of each category with every other one. From these coefficients distances are calculated such that the more frequently two categories co-occur the closer they are placed on a graphical representation of the interactions. Thus, actions which are commonly associated in kidnappings are put closer together on a plot than actions which less frequently or never co-occur. A schematic diagram of the results of the analysis can be seen in figure 1, over the page.

The plot can be seen to be divided into five broad regions. Four of these regions relate to the events by their geographical locations and the fifth, central, region contains categories common to events in all of these regions. The categories in the central region have the highest frequencies, being the most commonly occurring categories in kidnap events. They include such aspects as using an open approach in the event initiation, rather than tricks or deception, to take their hostages (71% of events), terrorists reported as having guns (72% of events) and no deadlines reported as being set by the terrorists during the course of negotiations (69% of events).

The four geographical regions indicate broad differences in the nature of events in different socio-political regions of the world. The fact that such regions are distinguishable indicates that although individual terrorist organisations will carry out their activities differently, the socio-political climate within which they operate also has some effect on the type of hostage

General Socio-Political Variation
in Kidnapping (Schematic)

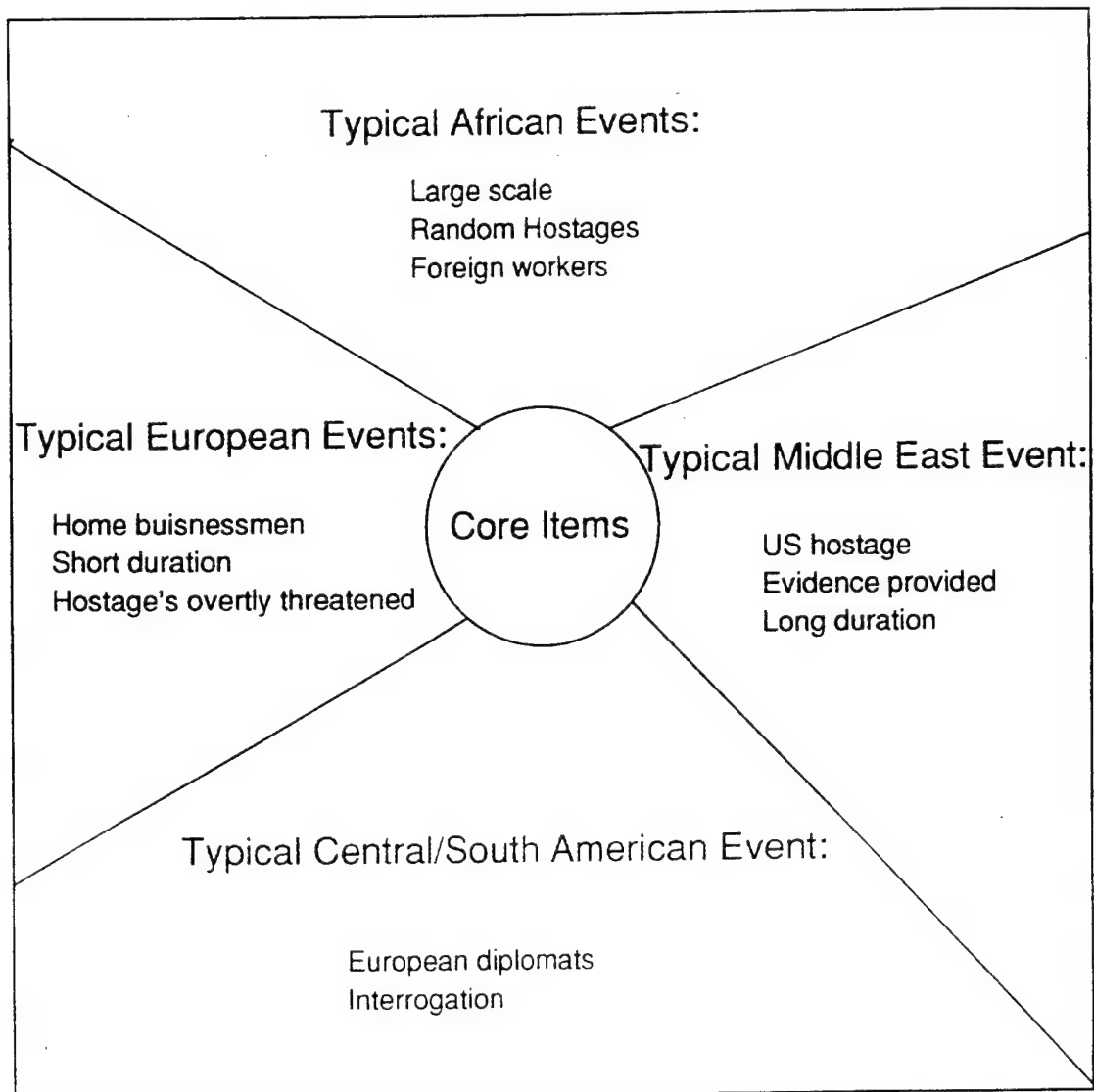


Figure 1

taking strategy that they are likely to employ. This can be seen in a brief consideration of the types of actions found in each region.

Kidnappings in Africa have been characterised by the taking of random hostages, generally more than one, and of mixed nationalities. The events often start with large scale attacks. Hostages tend to be foreign and local construction or aid workers rather than business or diplomatic targets. The hostages may be treated well, rather than as prisoners or mistreated. These events are more likely than those in other regions to end in the kidnappers being stormed and captured.

An example of such events can be seen in the June 1983 raid by the Liberation Front for Southern Sudan on a Presbyterian mission. Eleven Westerners of various nationalities were abducted. The kidnappers location was found and stormed by the Sudanese army, leading to the deaths of eighteen kidnappers and one soldier and the freeing unharmed of the hostages who had not already been released during the course of the event.

Another example can be seen in the February 1984 attack of UNITA in Angola on a government run diamond mine. Seventy five foreign workers were abducted. The hostages were forced to walk eight hundred kilometres, though reported being treated well. The only demand issued was the official recognition of the group by the British government. All of the hostages were released by their captors following the visit by a British official to the UNITA headquarters.

In contrast, events in the Middle East are often characterised by the taking of US hostages, evidence of which being provided to authorities. Such being the nature of the politics in the region more than one group may claim an event. Events often last long periods of time, the longest being years in duration.

Examples of such events can be seen in the January 1987 kidnap of a West German engineer, Alfred Schmidt, probably by the Hezbollah, and in a separate kidnapping on the same date, Terry Waite, Anglican Church envoy was taken by terrorists reported to be Hezbollah. In both cases the events surrounding the kidnappings were complex with much conflicting and contradictory information being released. Schmidt was held for eight months and Waite for several years.

European events tend to be characterised by the kidnapping of 'home' businessmen, that is businessmen of the same nationality of the country in which the event occurs. The events typically only last for several days or a few weeks. Money and publicity often appear as being the prime motives. Hostages are often taken from their workplace, demands being issued immediately. Hostage injury or death is more likely to be threatened than in events in the other regions.

A typical example of a European kidnapping is that of industrialist Javier de Ybarra in May 1977. He was kidnapped in Spain by ETA gunman and held for a \$15 million ransom. The government suggested alternative concessions rather than making the payment and the hostage was killed at the expiration of the deadline set.

Central and South American events fall into the same region indicating broad similarities in events across both geographical regions. Hostages are often European diplomats, taken while travelling. In some cases no demands were made, the aim of the kidnapping being to interrogate the hostages. In cases where demands were made, it is common for the home government and the hostage's family and company to all be involved in negotiations. Events in these regions appear most likely to result in partial or total meeting of demands made.

An example of such an event is the kidnapping of Eric Leupin, the honorary Dutch Consul in Cali, Columbia by FARC members. A ransom and the release of a prisoner was demanded. Although the home government did not negotiate, the family attempted to pay part of the ransom money demanded.

Another example is that of Kenneth Bishop, an executive of the Texas Petroleum Company in Columbia. He was abducted from his car while en route to work by members of the People's Revolutionary Organisation (ORP). He was released after the payment of a ransom by both the petroleum company and the hostage's family.

The lines which distinguish the regions on the plot are intended to indicate general regions rather than demarcate definite boundaries. It is possible for an event in any geographical region to differ from the general pattern suggested in the analysis. However, the regions indicated on the plot do give a perspective on the broad differences evident in kidnapping strategy in various areas of the world. As stated, it is suggested that these differences are a function of the socio-political issues at stake within different geographical areas of the world.

7.2 - Terrorist Action in Kidnap

Having ascertained that there are geo-political differences in the nature of hostage taking events with respect not only to the terrorists actions, but also the authorities response and the interaction of both parties during negotiations, the next step was to examine the actions under direct control of the terrorists in more detail. The socio-political factors, while being influential in determining factors such as terrorist motivation, target selection and demands likely to be made, will be relatively general in effect. They will effect the emphasis of a hostage taking rather than the specific details.

The analysis described above used a subset of the data, as stated. For the analysis of the terrorists actions the original data was reconsidered, selecting a further subset pertaining only to the hostage takers activities, regardless of category frequency. All categories relating to the context within which the event occurred were excluded to allow the interrelations of actions to be focused on in detail.

The actions selected formed a subset of thirty categories again analysed using the SSA procedure. The resultant plot can be seen in figure 2 on the following page. The plot can be seen to be divided into four sectors and further by a series of concentric areas.

The quadrants are formed by the interaction of two facets at right angles to each other, one dividing the categories vertically and the other dividing it horizontally. Each of these facets are termed 'axial' facets and the structure generated by their interaction is termed a 'duplex'.

Kidnappers Actions

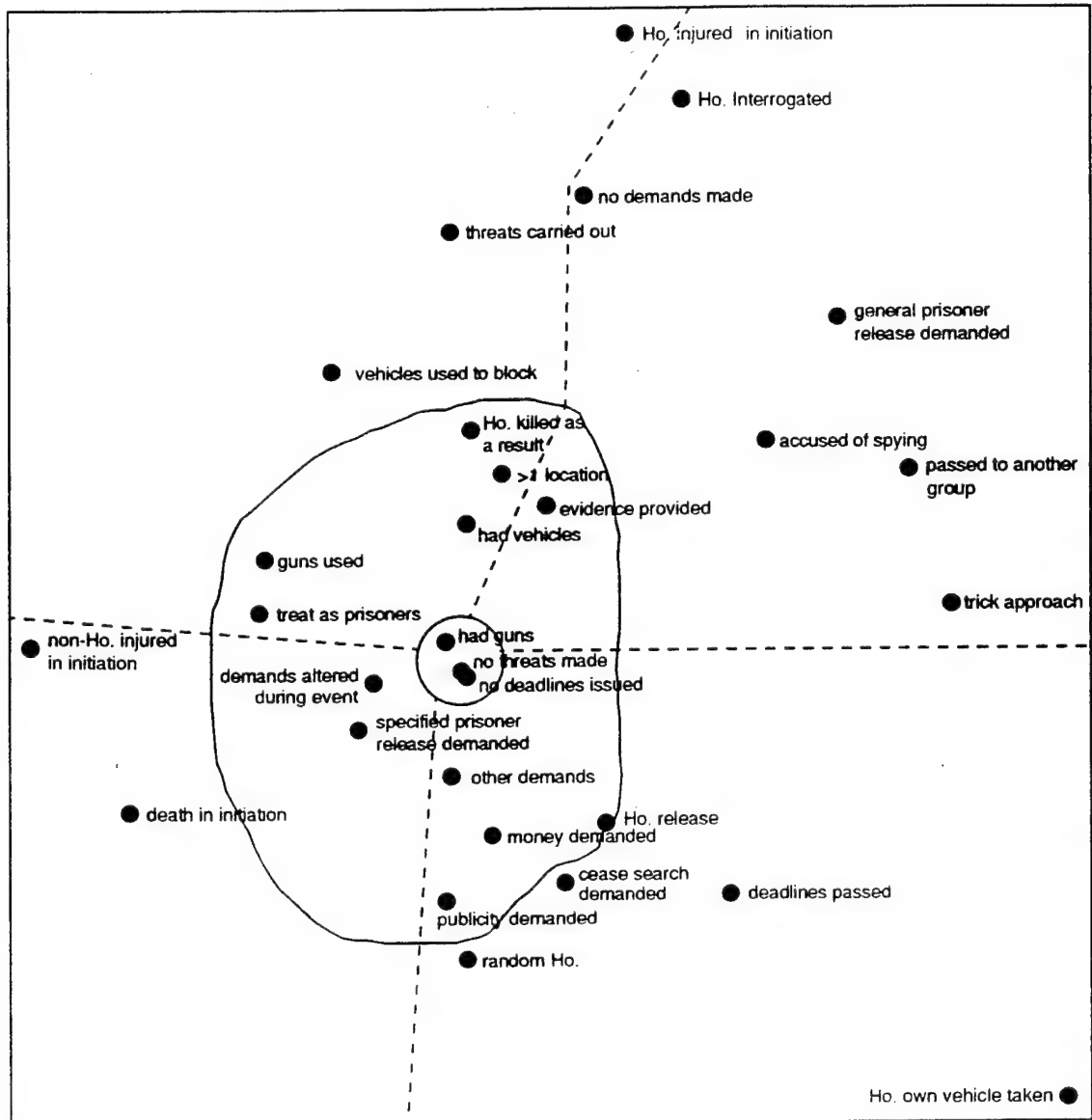


Figure 2

The concentric areas relate to the frequency of occurrence of each category in the kidnaps included in the analysis: The most frequent in the centre and the least frequent at the periphery of the plot. This is termed a MODULATING facet and represents a simple order corresponding with distance from the centre.

Looking first at the implications of the concentric regions; three areas have been marked, though further frequency gradients can be added if necessary. These three regions have been selected based upon their utility in understanding the processes occurring in kidnapping. The central region contains the categories most common to kidnapping events, those acts occurring in more than 60% of all cases. They can be considered to be core features, fundamental to kidnapping.

It appears to be surprising that making no threats and setting no deadlines should be so frequent. Neither being made in almost 70% of cases. It may be fundamental to kidnapping that the hidden nature of the terrorists location implies greater threat to the hostages. In other hostage taking strategies the authorities are more readily able to intervene physically, making the use of overt threat more necessary.

The items in the middle band have frequencies from 20 to 60%. They are relatively common but less fundamental to the nature of kidnapping. These categories indicate the range of actions which can typically occur during an event, but one would not expect all of them to occur in any given event.

The items in the outside region are the least common, occurring in less than 20% of cases. Their lower likelihood of occurrence makes them stronger indicators of differing strategies of kidnapping than the more common items toward the centre. This is more apparent when considering the schematic diagram illustrated in figure 3.

The schematic plot indicates the themes proposed to be characteristic of the categories which fall into each of the regions of space separated by the partition lines. The exact location of the partition lines is not as important as the theoretical rationale for the content of the regions they are proposed to bound. These regions have been identified by considering the nature of the categories in the plot with reference to potential psychological factors identified through the literature review and the previous analyses carried out.

Thus the region forming the top left-hand quadrant of the plot is composed of items indicating prior preparation in the allocation of resources and the willingness to use force at various stages throughout an event. The items in the top right-hand sector contains items indicating little use of force but the availability of information and contact with other groups.

The lower left region contains items relating to the spontaneous use of force, both physically in the initiation stage and less physically but equally threateningly during the course on an event. The remaining items in the lower right-hand area relate to less forceful acts such as the issuing of demands and actions indicating flexibility and an ability to be reasonable.

As reported at the beginning of this section, from the schematic diagram two facets are hypothesised to be operating, one causing variation in the nature of the items horizontally and the other vertically. The hypothetical facets can be seen in figure 4.

Kidnappers Actions (Schematic)

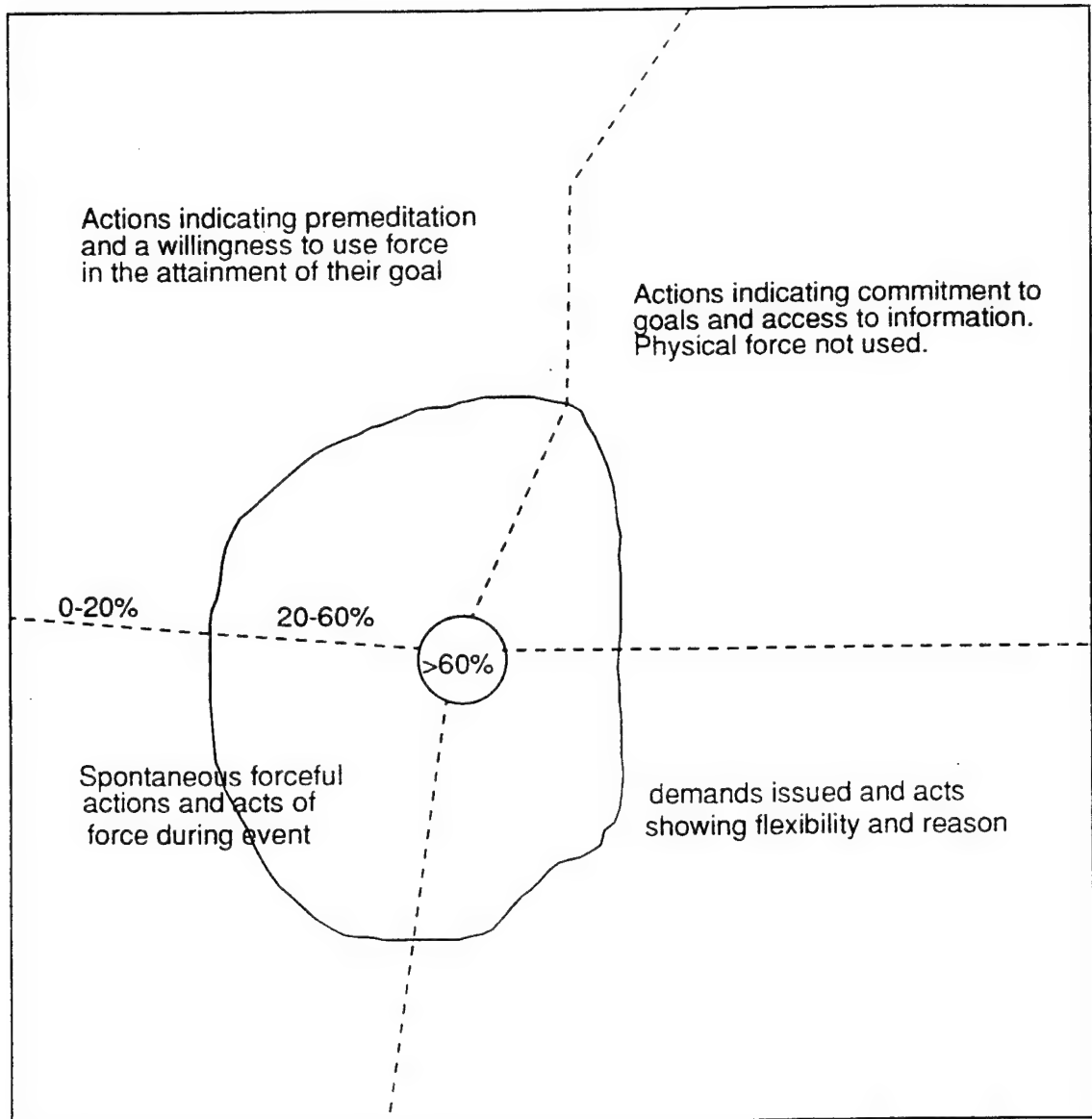


Figure 3

Facets Derived From Analysis

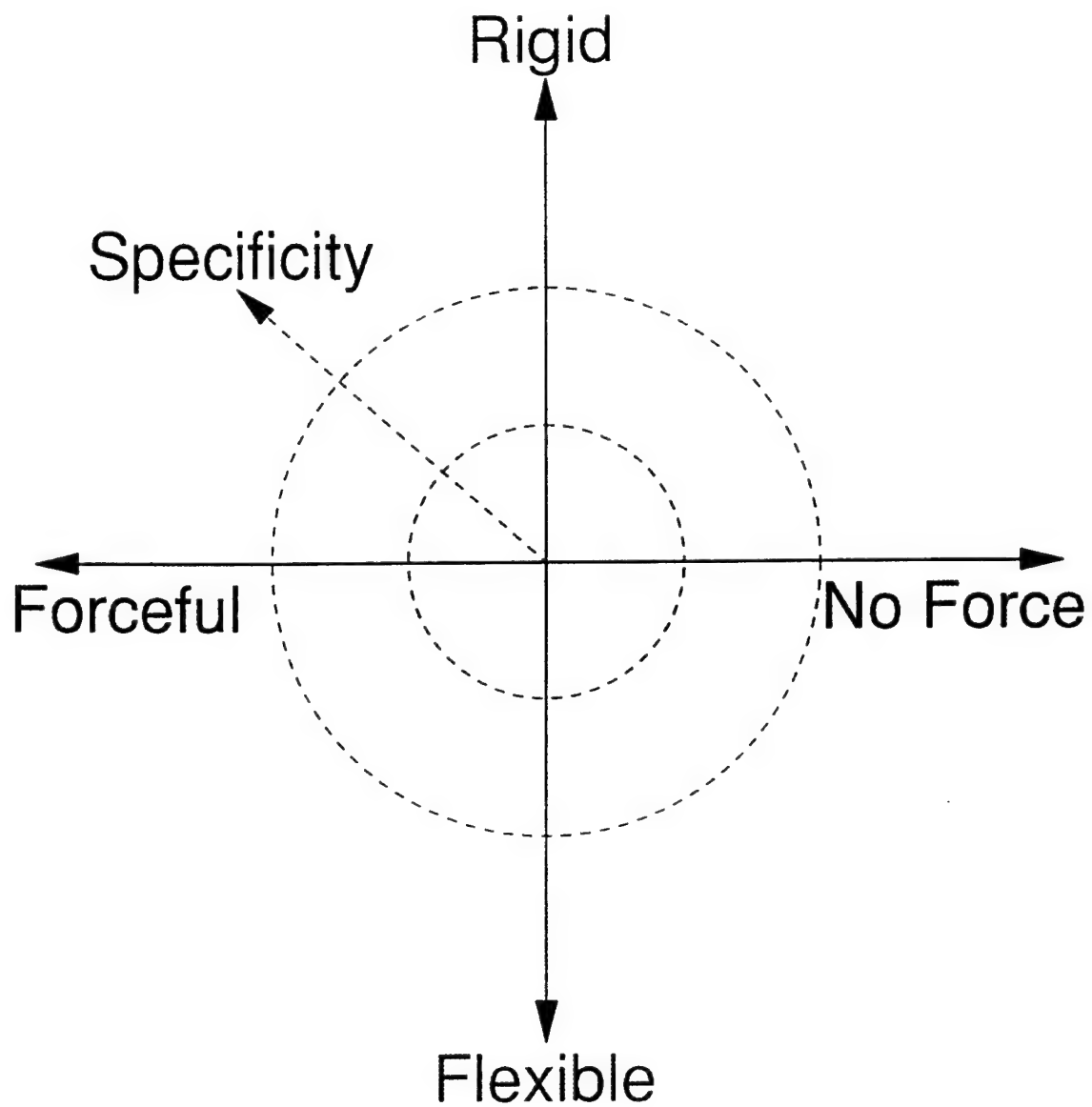


Figure 4

The first facet refers to the use of force and acts horizontally. Actions indicating use of physical force tend to fall to the left and those not related to the use of force lie on the right of the plot. In the centre of the plot lie items such as altering demands or interrogating hostages which carry implicit threat.

The second facet relates to the terrorists rigidity or flexibility of conduct during the course of the event. Some actions indicate a high degree of rigidity, such as focusing directly on their goals, not allowing for other considerations. At the other end of the scale there are items indicating a high degree of flexibility, or willingness to change with the circumstances.

Using these facets and the fact that the less typical items may be used to indicate differing strategies, four 'modes' of terrorist action may be identified, relating to each of the quadrants. Rigid and Forceful actions may characterise groups which are determined to achieve their goals at any cost, regardless of governmental policy or respect for hostage safety. Rigid but less forceful actions may typify politically motivated groups who are dogmatic in their desires but are more sensitive to the effects of their actions. Flexible and forceful actions may indicate less ideologically driven groups in terms of goal achievement. This may characterise more established groups who are experienced in the need to bargain but still use force to indicate intent. Flexible and non-forceful actions are likely to be committed by the most inexperienced or least committed groups.

It is not suggested that a terrorist group will exhibit actions solely in one or other of these regions. The four 'modes' are meant to serve as indicators of the possible extremes in the ways of acting based upon the interaction of the two facets. This is not proposed to be a classification of terrorist types. What this does serve to indicate is that there are a range of possible ways in which terrorist groups can act.

These facets are proposed to be constructs underlying the previous findings that hostage taking groups differ on a scale from the most professional to most personal in motivation. The professional groups will be those characterised by more forceful and more focused or rigid actions. In contrast the more personally motivated and least sophisticated hostage takings are likely to be characterised by little force and considerably more flexibility of action.

7.3 - Hostage Taking Behaviour in Barricade-Siege: 'Professionals, Reactionaries and Bandits'

The previous section has illustrated how facets of kidnappers' behaviour can be analysed using Smallest Space Analysis (SSA) to produce a model of hostage taking behaviour. The following section shows how exactly the same approach can be used to generate a model of behaviour in barricade-siege.

From the siege data base the variables which were under the control of the terrorists were selected and converted into dichotomous data to indicate whether or not a particular feature occurred.

SSA represents the behaviours as points in space in such a way that the more likely two behaviours are to occur in the same incident, the closer together they will be in the plot. Thus, referring to Figure 5, in an incident where the hostage takers are armed with knives, hostages are also likely to be physically abused (bottom right), but it is very unlikely that the hostage takers will demand publicity (top left).

The most frequently occurring features of the incidents are found in the centre of the plot and the relatively rare features are found around the periphery. The plot has been partitioned according to three distinct types of hostage taker on the basis of the behaviours displayed. These three types are qualitatively different, and will be described below.

Professionals

The region at the bottom left hand side of the plot contains behaviours associated with the 'professional' hostage taking incidents. These are likely to be incidents carried out by well known, established groups and are generally well planned. These incidents are generally politically motivated and hostages have been specifically targeted, for example through the take over of embassies and consulates. Hostage takers are likely to have a high level of resources in terms of weaponry and will have gained intelligence about the usual procedures of the organisation. These hostage takers are therefore the most likely to gain access to the building through some form of trick approach. Hostages are generally treated well, not being physically or mentally abused, and the hostage takers are open to negotiation with the authorities.

Reactionaries

At the top of the plot are those incidents carried out by terrorists characterised as 'reactionaries'. These incidents are generally motivated by perceived social or political injustice. Often these incidents take place in oppressive regimes and perpetrators will demand political change, publicity for their beliefs, and often travel to flee the country. There are likely to be a large number of hostage takers involved and the hostages are unlikely to be ill treated. These sieges are often of short duration.

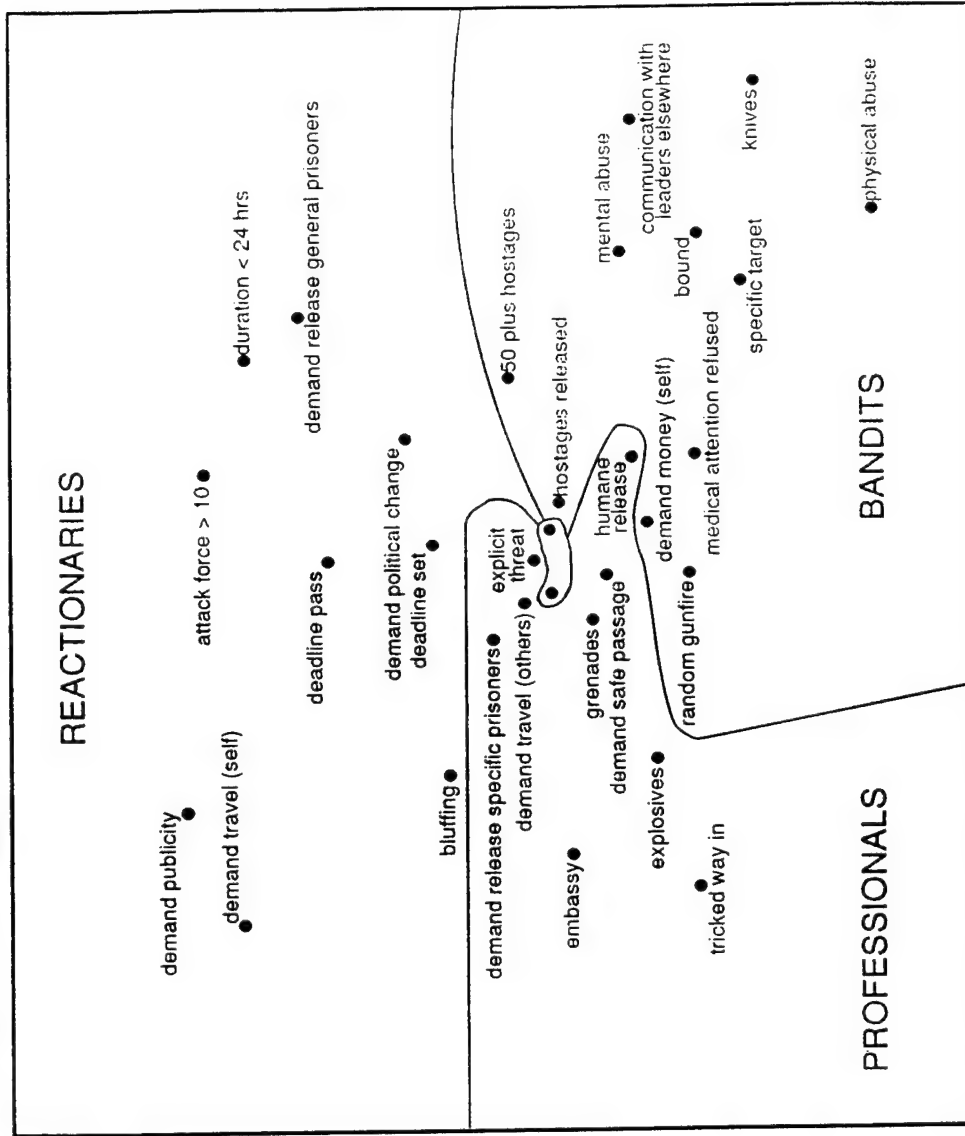
Bandits

The term 'bandits' was coined to reflect the spontaneous disorganisation of the hostage takers in this region of the plot. Although a large number of hostages may be taken, the hostage takers are not able to maintain control of the hostages without unnecessary violence and abuse. Locations are likely to be taken over through storming the building and are often characterised by random gunfire. The lack of organisation and planning in these incidents are evidenced by the need to communicate with leaders.

The SSA of the behaviour exhibited in barricade-siege shows three distinct types of hostage taker based on an empirical analysis of what actually happens during the incidents. The different type of siege imply different styles of interaction with the authorities. The model provides a framework for studying the other facets of such events and for predicting the likely outcomes.

SSA Plot of Hostage Taker Behaviour During Barricade Siege Incidents

Figure 5



7.4 - A Model of Hijack Behaviour

The key features of hijacking were selected from the data base and analysed using Smallest Space Analysis. The features included in the analysis covered the type of flight, means of gaining control, resources available in terms of weaponry, the nature of any weapon use, the demands made and the nature of any hostage releases.

SSA represents each of the behaviours as points in space. The closer together two points are the more likely they are to co-occur, that is to occur in the same incident. Figure 6 shows the SSA for 29 behaviours for one hundred cases of aerial hijack. The plot shows that, for example, if a domestic flight is hijacked (point 7) then it is likely that the demand will be for travel for its own sake (point 29), and it is very unlikely that hostages would be removed and kept at a separate location (point 12). This reflects the underlying concept of 'organisation'. Thus, a hijacker who is essentially personally motivated, ie is taking the flight for the purpose of his or her own travel, is less likely to have the resources to board an international flight or to have arranged for hostages to be kept at a separate location following the arrival at the desired destination.

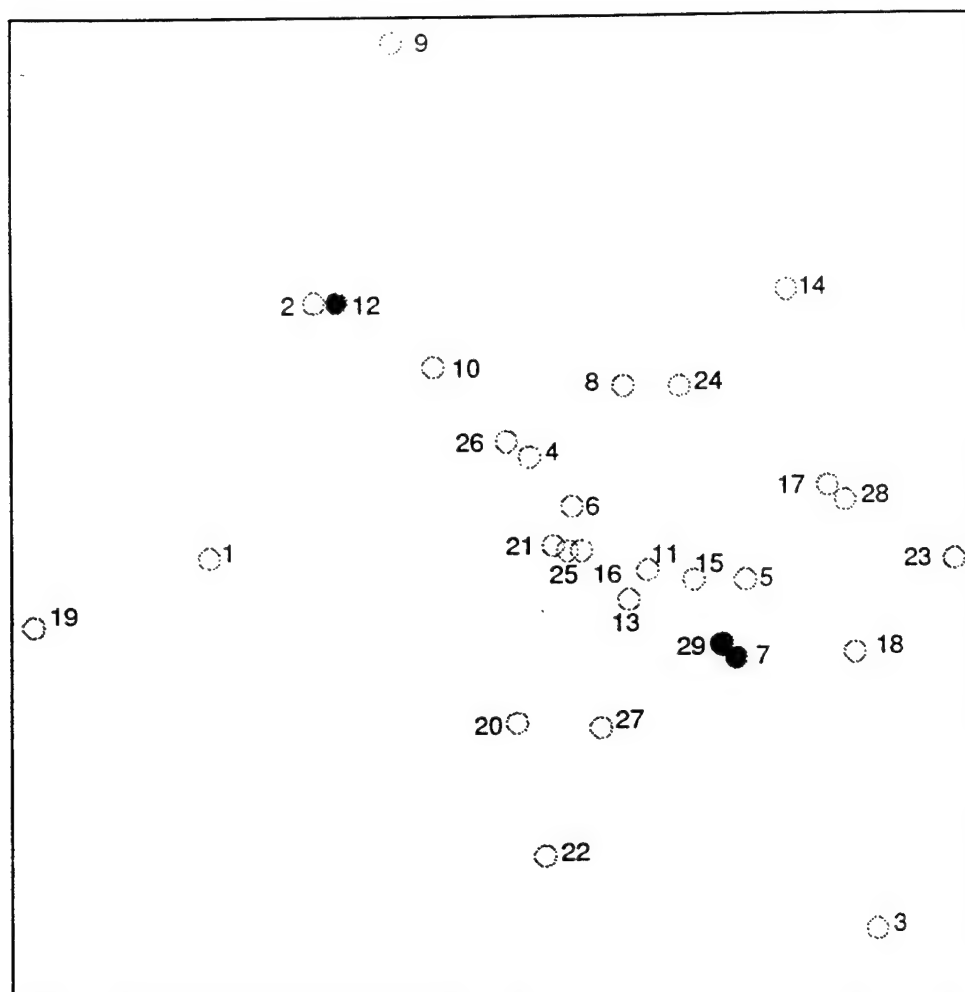
Using SSA it is possible to develop powerful models of what actually happens during hostage taking incidents. The first way the model can be used is to consider the frequency at which each of the behaviours occur across the sample of incidents. Figure 7 shows the frequency contours for the SSA. In the centre of the plot are features of the incidents which are very common, for example, having guns (point 13) or explosives (point 15). This shows that having the necessary resources in terms of weaponry is a central feature of a hijacking incident. Around the edges of the plot are those features of the hijacks which occur very infrequently, for example, any real indication that the hijackers would be prepared to die for the cause (Martyrdom, point 19).

However, the results become more interesting when the specific incidents are examined. For example, the same plot is reproduced in Figure 8. In this plot the points pertaining to what went on in a personally motivated incident are blocked in. These then were the features of just one incident. The plot shows that in this particular case an individual thought not to be associated with any known terrorist group took a domestic flight, armed with guns and explosives. He threatened to blow up the aircraft unless he was taken a specified destination, and upon landing released all the hostages immediately.

In contrast, Figure 9 illustrates the features of an incident which was carried out by the PFLP. This shows that the hostage takers, armed with guns, explosives and grenades, took over an international flight demanding the release of a large number of prisoners. Although they were reassuring to the passengers, when the plane landed they were still kept as hostages at a separate location. The plane was destroyed.

As more and more incidents are overlaid onto the plot, it becomes evident that the more experienced 'professional' groups can be characterised by behaviours at the top left hand side of the plot, whilst more inexperienced, internally motivated incidents tend to be characterised by behaviours at the bottom right hand side of the plot (see Figure 10).

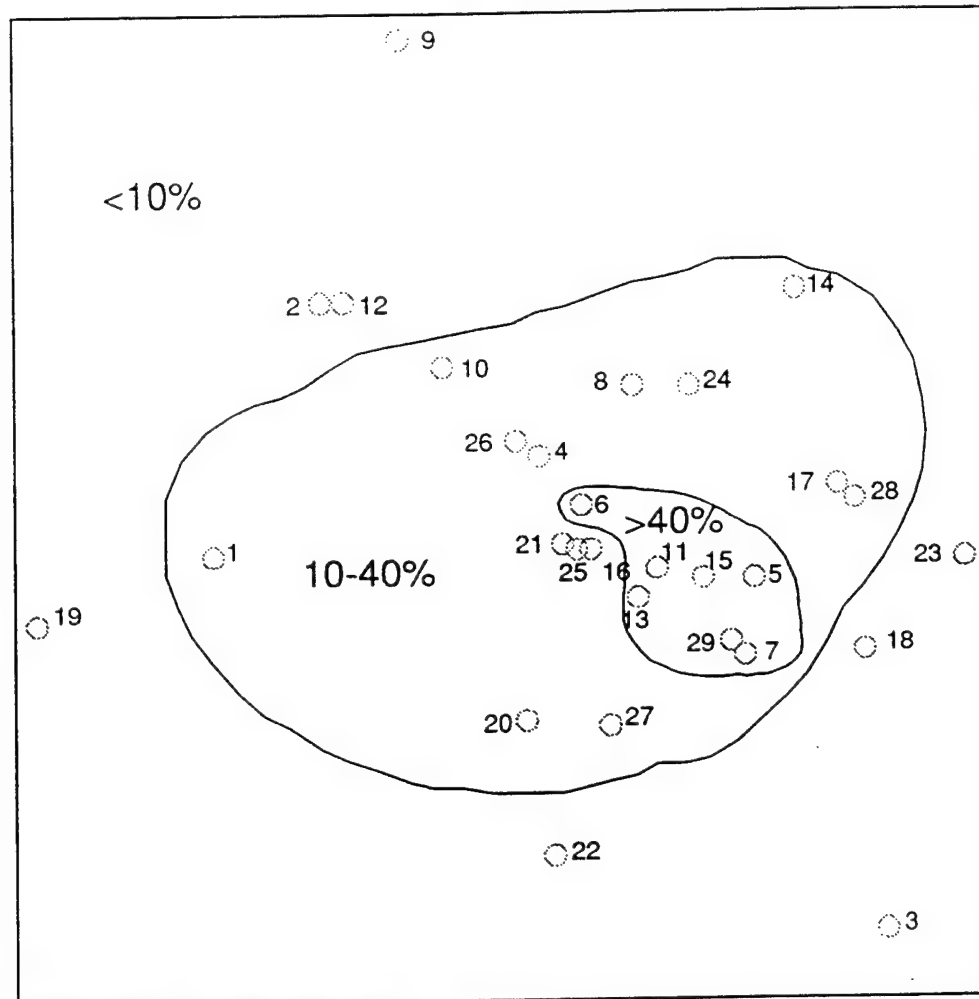
SSA of 29 Hijack Variables (100 Incidents)



- | | |
|-------------------------|-------------------------------------|
| 1. US. Aircraft | 16. Grenades |
| 2. Israeli Aircraft | 17. Other weapons |
| 3. Japanese Aircraft | 18. Suicidal |
| 4. European Aircraft | 19. Martyrdom |
| 5. Other Nationality | 20. Shots when forced |
| 6. International Flight | 21. Spontaneous shots |
| 7. Domestic Flight | 22. Demoralisation |
| 8. Held up stewardess | 23. Immediate release of passengers |
| 9. Reassures passengers | 24. Release through negotiation |
| 10. Deliberate damage | 25. Demand release of colleagues |
| 11. Threat of damage | 26. Demand general release |
| 12. Hostages removed | 27. Demand money for self |
| 13. Guns | 28. Demand publicity |
| 14. Machine guns | 29. Demand travel |
| 15. Explosives | |

Figure 6

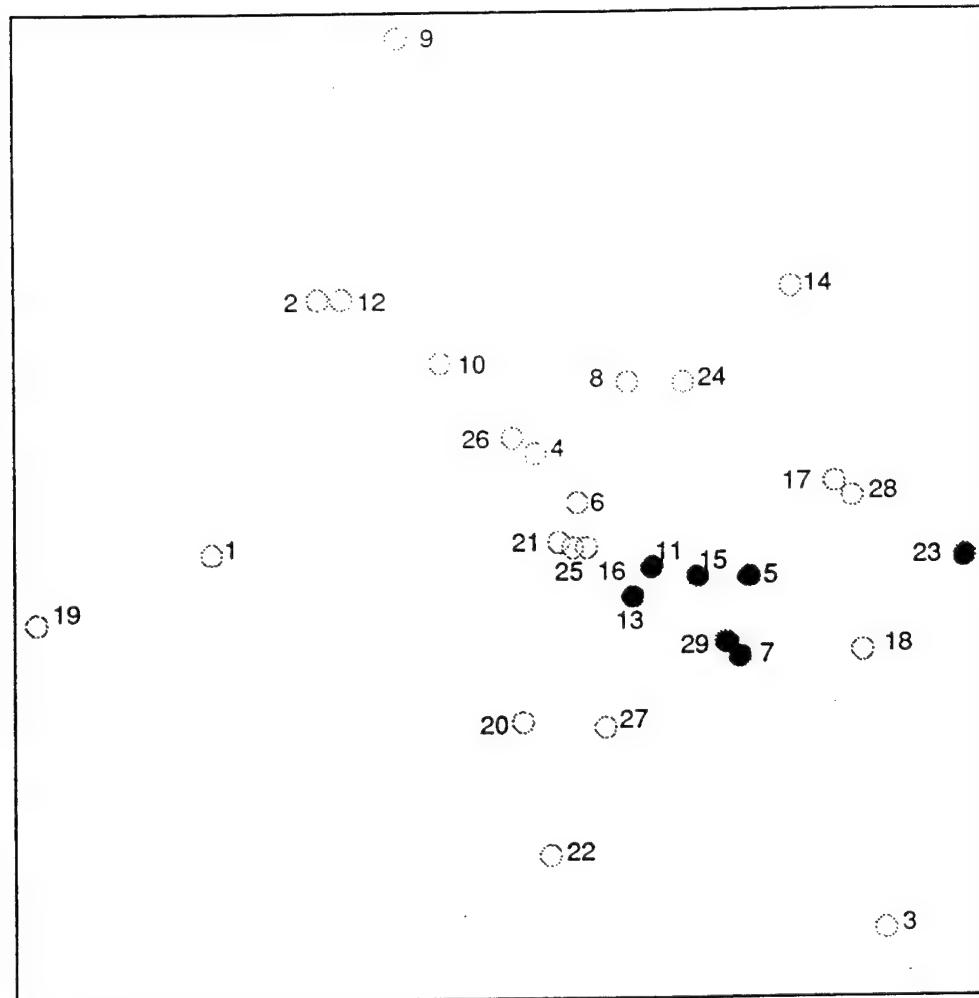
SSA of 29 Hijack Variables (100 Incidents)



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|-------------------------|-------------------------------------|
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| 15. Explosives | |

Figure 7.

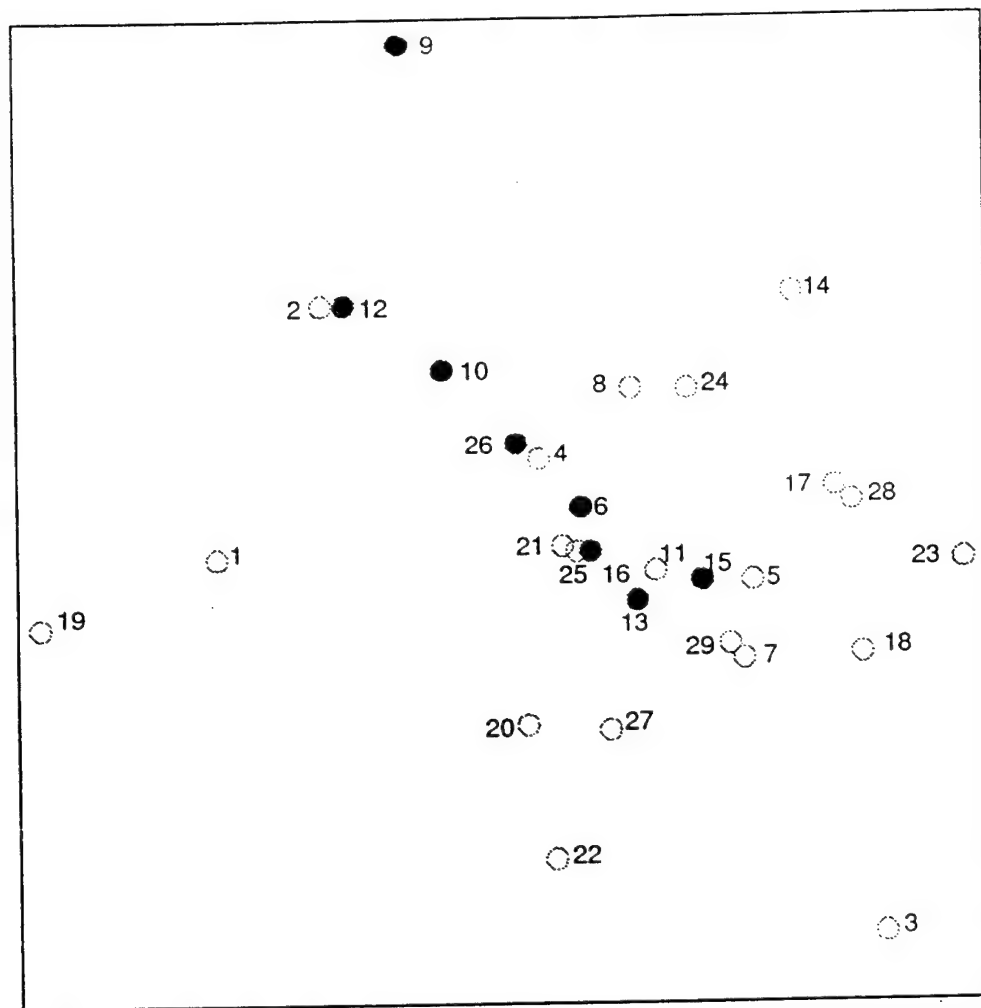
SSA of 29 Hijack Variables (100 Incidents)



- | | |
|-------------------------|-------------------------------------|
| 1. US. Aircraft | 16. Grenades |
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| 14. Machine guns | 29. Demand travel |
| 15. Explosives | |

Figure 8

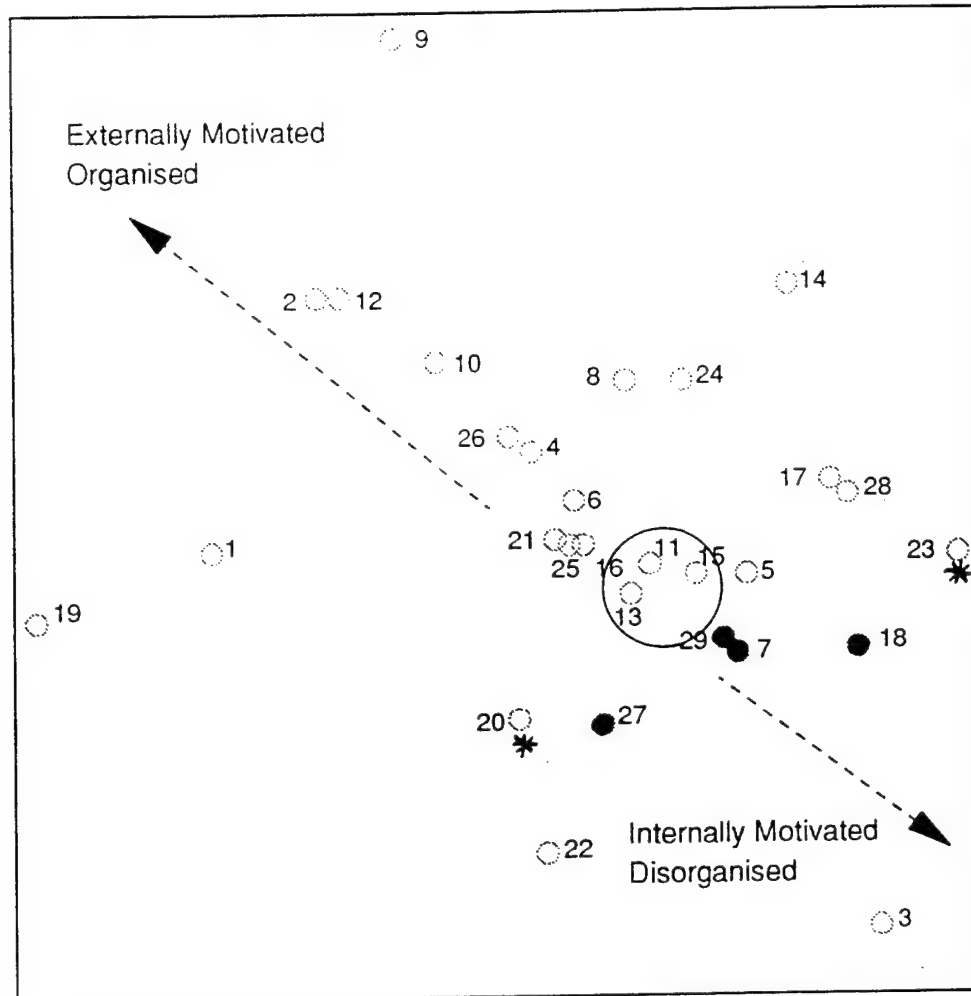
SSA of 29 Hijack Variables (100 Incidents)



- | | |
|-------------------------|-------------------------------------|
| 1. US. Aircraft | 16. Grenades |
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| 11. Threat of damage | 26. Demand general release |
| 12. Hostages removed | 27. Demand money for self |
| 13. Guns | 28. Demand publicity |
| 14. Machine guns | 29. Demand travel |
| 15. Explosives | |

Figure 9

SSA of 29 Hijack Variables (100 Incidents)



- | | |
|-------------------------|-------------------------------------|
| 1. US. Aircraft | 16. Grenades |
| 2. Israeli Aircraft | 17. Other weapons |
| 3. Japanese Aircraft | 18. Suicidal |
| 4. European Aircraft | 19. Martyrdom |
| 5. Other Nationality | 20. Shots when forced |
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| 7. Domestic Flight | 22. Demoralisation |
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| 14. Machine guns | 29. Demand travel |
| 15. Explosives | |

Figure 10

The implications of this model can be seen from a consideration of the likely features of an incident which may co-occur. For example, a number of features of the incident are evident to decision makers from the outset, ie that the flight was on a domestic route, and the demands being made are for money and travel. The hostage taker has been reported to be making comments about his own suicide should the mission fail. These behaviours are circled on the plot. Across the 100 incidents considered here it is therefore also quite likely that the hostage taker will release all the passengers on arrival at his destination, but that any attempt to thwart the hijacking will result in shots being fired by the hijacker (marked * on the plot).

7.5 - Hijacking Demands: A Multivariate Model

It has been suggested from the general model of hijacking behaviour that the demands made may be an important clue to the type of hijack in progress, and therefore to the likely subsequent behaviour of the hostage takers.

There has been some speculation in the literature as to whether or not the demands made by hostage takers are of any significance. For example, Sandler and Scott (1987) and Corsi (1981) have analysed the patterns of negotiations between hostage takers and authorities based on an economic bargaining model. Their work tends to suggest that the demands made are of importance as they reflect the hostage takers bargaining style and to some extent the likely outcome in response from the authorities. This makes intuitive sense in that the more unrealistic the demands, the less likely any demands are to be met.

In contrast, Mickolus (1987) has criticised this work suggesting that the demands made may not adequately reflect the true motivations of the terrorists. This is a position supported by the work of Merrari and Friedland (1985), and Rubin and Friedland (1986) who suggest that the true motivation for terrorist hostage taking lies in the publicity received rather than any concessions that may be made by the authorities.

The current research question is therefore whether there is any structure to the demands made by hostage takers. If demands were essentially arbitrary, then it would not be expected that there would be any pattern to the type of demands issued. Alternatively, if the demands made are a reflection of the type of organisation involved then one would expect consistencies in what they are asking for.

The current work hypothesises the latter, ie that even though the specific demands made may not be the true motivation for the incident itself, something about the organisation and its aims is likely to be reflected in what they ask for. If the demands are a measure of some more global characteristic of the group, then it is likely that they will also be related to other aspects of their behaviour, for example, the way they treat the hostages, or how they are likely to respond to the authorities.

The first step in this exploration is therefore to assess, what, if any structure there is in the demands made in aerial hijacking.

The five most frequent demands made were analysed: specific prisoners to be released, general prisoners to be released, travel for its own sake, publicity, and money for self. Each

of the one hundred incidents was coded on each of the five demands as whether or not the demand was made. Thus, each incident can be represented as a profile of scores (eg 11211) which describes the demands made. There are 32 possible profiles ($2 \times 2 \times 2 \times 2 \times 2$). The following analysis aims to discover

- i) which of the profiles exist ? and
- ii) which combinations of demands are likely to be made ?

The one hundred profiles were analysed using Multidimensional Scalogram Analysis (MSA). The analysis plots each profile as a point in space. If two or more incidents share the same profile they will be represented as the same point in space. The profiles are plotted so that for each of the demands the space can be divided into clear regions where those profiles where a demand is made are separated from those where a demand is not. The result of the analysis is a model of the combinations of demands made, represented in geometric space.

Results

The model presented in Figures 11 to 16 accounts for 89% of the hijack incidents. The first finding from the model is that all 32 possible profiles do not exist in the data set. Only 17 points are represented in the plot. This illustrates that not all of the possible combinations of demands are made in the sample of incidents considered here. Rather, there are specific patterns to what is likely to be asked for. The plots shown in Figures 12 to 15 show these patterns in more detail. These plots relate to the original plot and can be conceptualised as overlapping regions. In Figure 12 the shaded region covers the right hand side of the plot and demonstrates that in the six profiles on the right of the plot the hijackers demanded that general prisoners be released. Figure 13 shows a shaded region on the left of the plot and reveals that in the incidents represented by the six profiles on the left, demands for specific prisoners to be released were made. Taking these two plots in combination shows that these two demands are extremely unlikely to be made in the same hijack. Thus hijackers may ask for specific colleagues to be released to rejoin the organisation, an essentially **strategic** demand, or may ask for a large number of general prisoners to be released, which is more of a **global** statement of perceived injustice.

Figure 14 shows that in the incidents represented by the six profiles at the top of the plot, the demand made was for travel for its own sake. Figure 15 shows that in the five profiles at the bottom of the plot the demand made was for publicity for the hijackers' cause. Here again, there is no overlap between the incidents where publicity is sought, and the incidents where travel is sought. It is extremely unlikely that a hostage taker will ask for some kind of publicity broadcast or publication and ask to be taken to a destination for the sake of relocation. These two demands have therefore been characterised as **internal** (motivated by own needs to travel) and **external** (motivated by desire to publicise the cause).

The independence of these demands is a very important finding because it suggests that the demands do indeed reflect something about the nature of the hijack. If the demands were quite random one would expect all 32 combinations of demands to be made and there to be no underlying pattern in what was asked for. The results suggest that **either** the hijacker is

MSA of Hijack Incidents for Five Demands

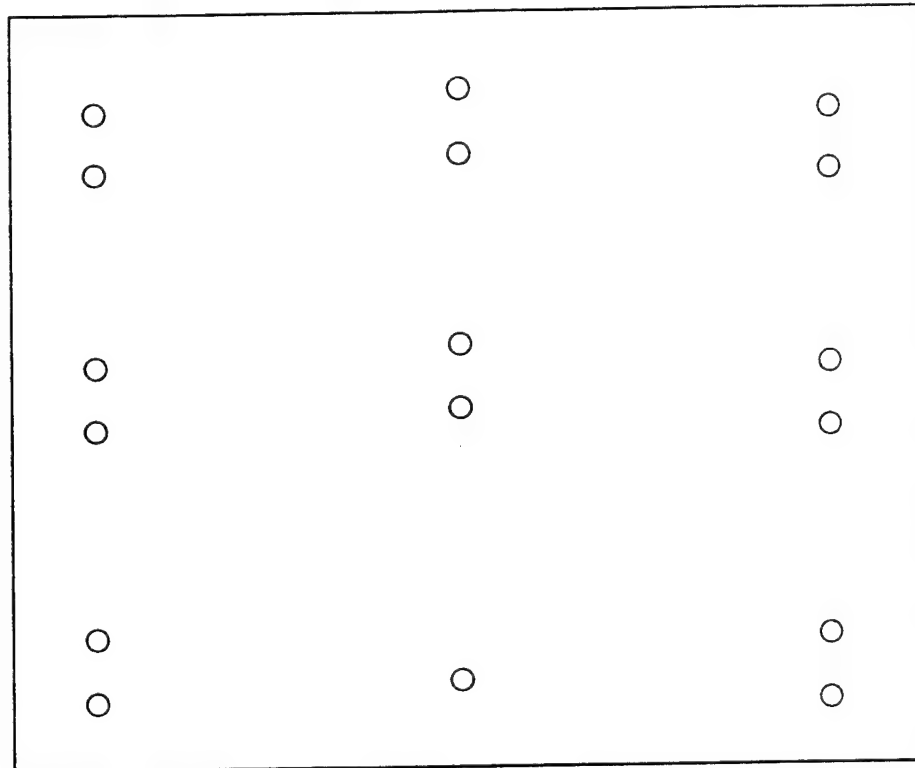


Figure 11

MSA of Hijack Incidents for Five Demands

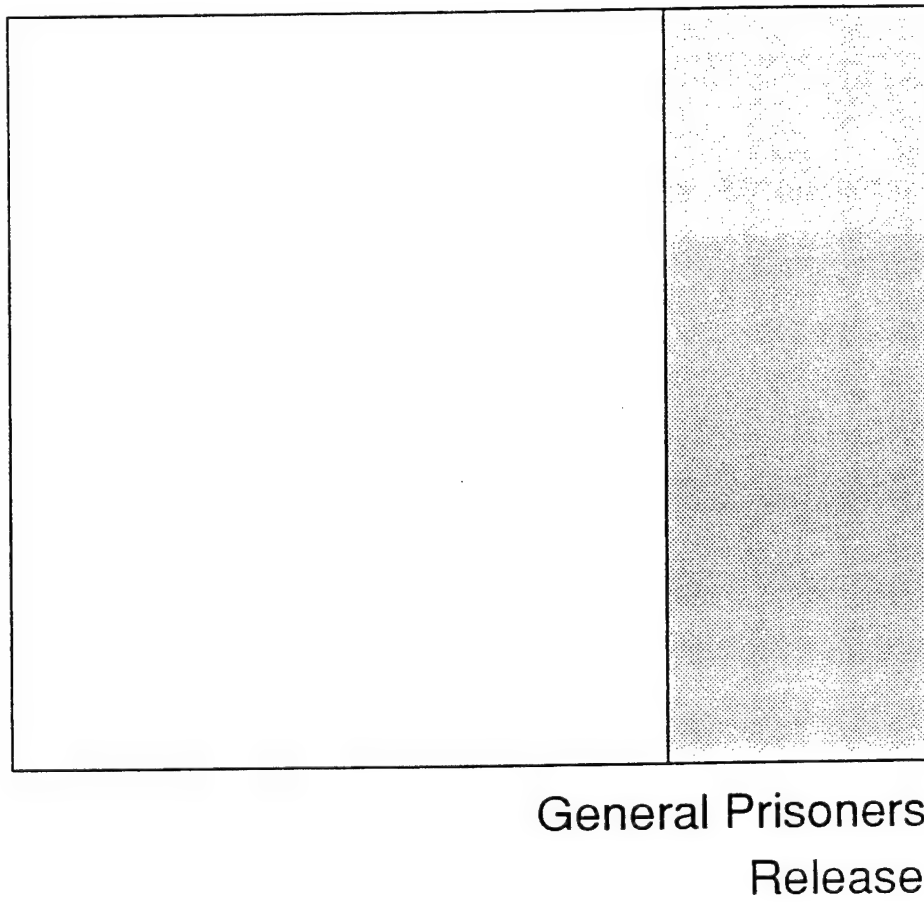
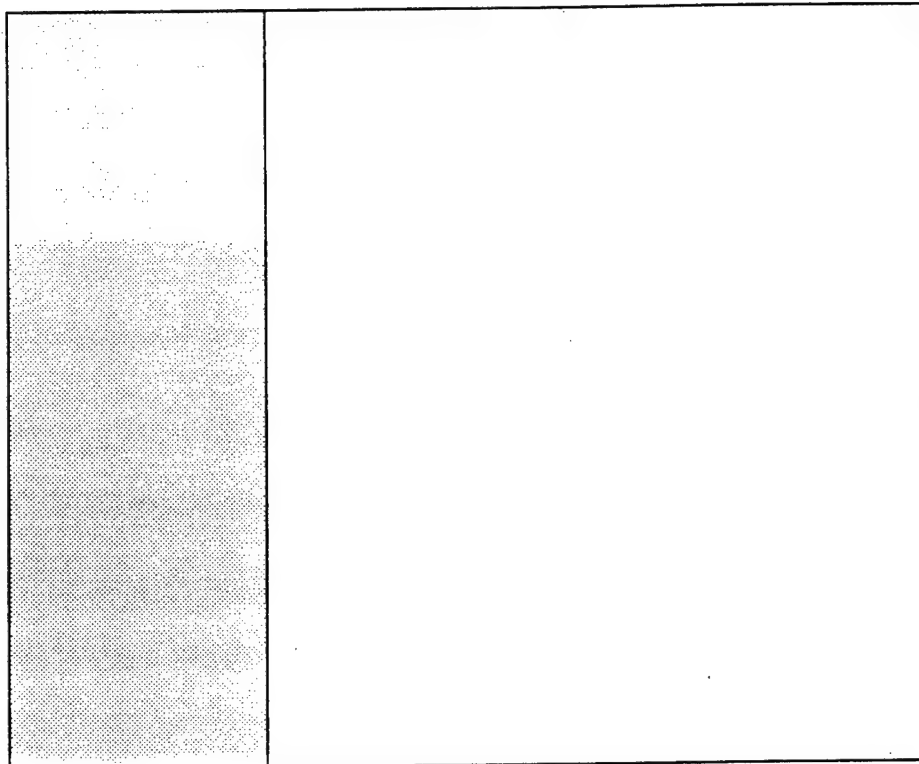


Figure 12

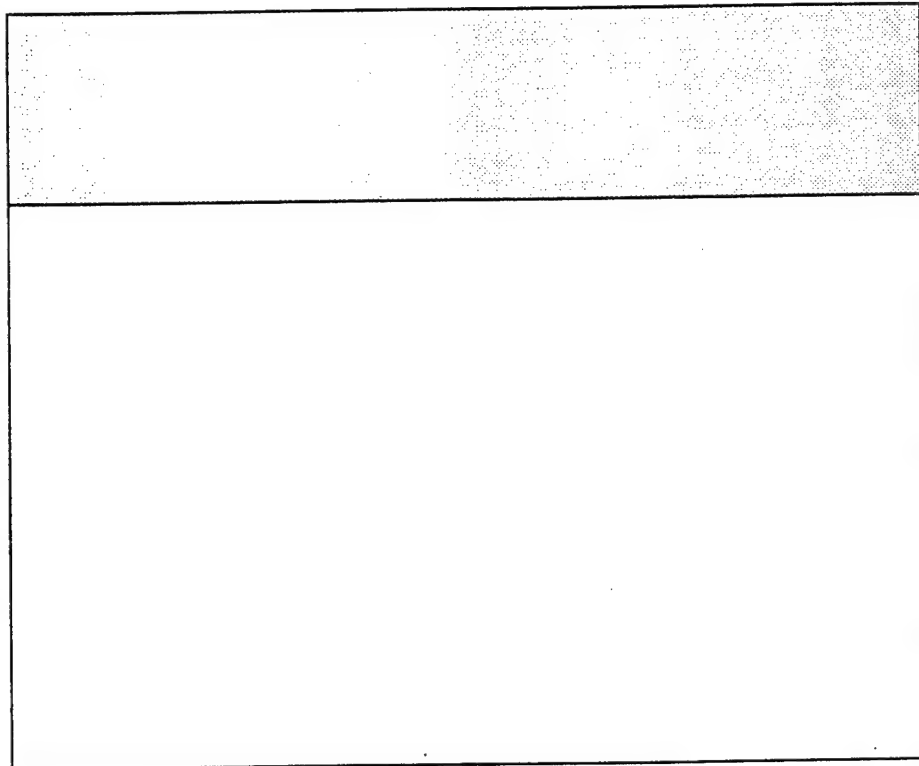
MSA of Hijack Incidents for Five Demands



Specific Prisoners
Release

Figure 13

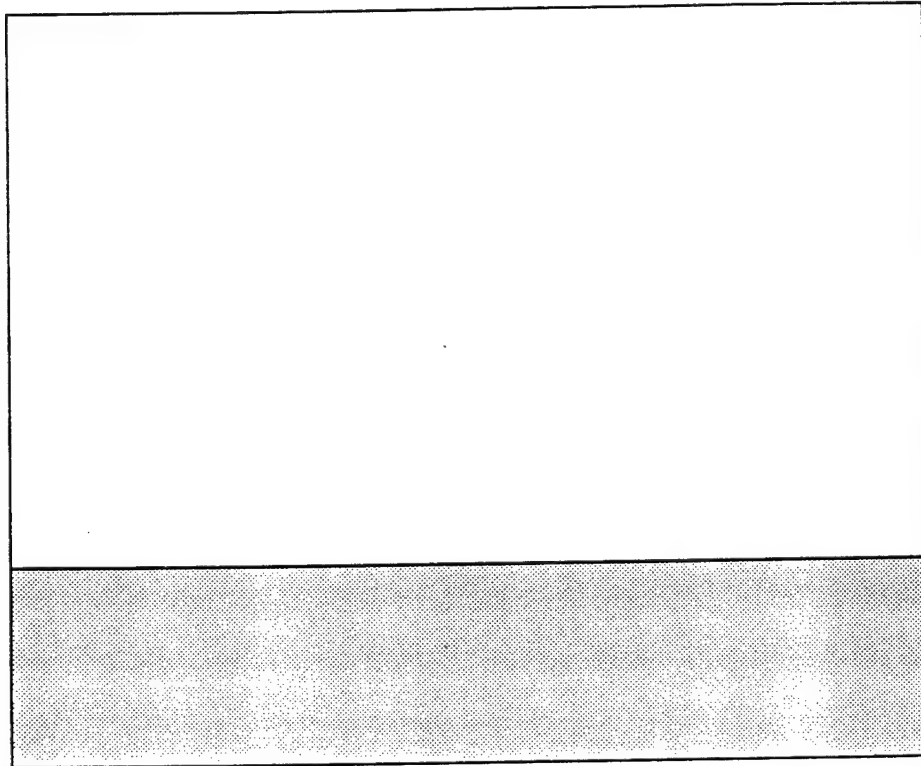
MSA of Hijack Incidents for Five Demands



Travel

Figure 14

MSA of Hijack Incidents for Five Demands



Publicity

Figure 15

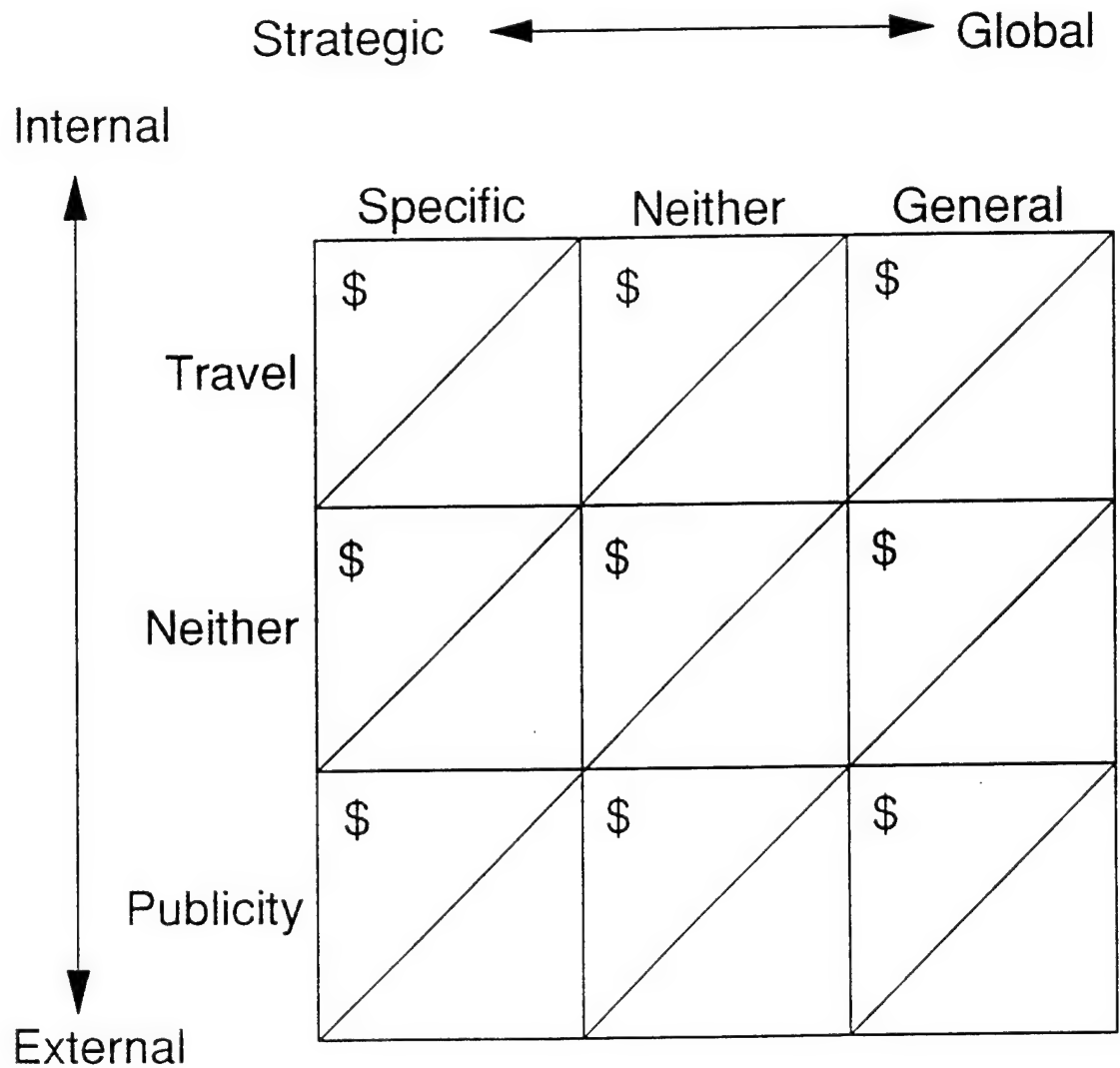
characterised by an internal or external motivation, and that they will **either** take a strategic or a global approach to demands concerning prisoners.

When the four different partitions are combined, the resulting model shows nine different combination of demands which may be made. However, there is one more distinction which must be accounted for. In each of the nine squares of the model (except for one), two profiles exist. The difference between the two profiles is accounted for by the demand for money; one set of incidents asked for money, one set did not. It should be noted therefore that the demand for money adds a third dimension to the model, being independent of the internal/external and global/specific dimensions.

The final model is shown in Figure 16. It clearly indicates that there is a structure to what hijackers ask for and that the demands made are not random. If the demands have a structure it can be hypothesised that this structure relates to some meaningful difference between the hijackers themselves and their motivations. This in turn suggests that there are likely to be other actions associated with these types of hijacks which are also related to important differences between them. For example, a hostage taker who is externally motivated by a desire for publicity for perceived injustice, and has a global demand regarding a general set of prisoners, may be less inclined to incur bad publicity for their cause by harming the hostages. On the other hand, a hijacker who has a strong internal motivation to travel, combined with a desire to see a specific colleague freed, may be less inclined to surrender to the authorities and give up a mission which has a very personal significance.

In this way then, the model allows for the test of a number of other hypotheses concerning the possible outcomes of hijacking incidents. It allows the potential prediction of factors of direct relevance to those who manage and negotiate with hostage takers. The model provides a theoretical starting point for developing practical implications. These implications can be derived from tangible, observable features of an incident which are known to the authorities very early on in an incident.

Multivariate Model of Hijack Demands



\$ = Demand for Money

Figure 16

8 - EXTENDING THE MODEL: CONSISTENCY AND DEVELOPMENT

A number of studies have shown that there are definite and consistent patterns in the actions carried out by individual offenders. These patterns related to behavioural themes or modes rather than a classification of crimes carried out, and can be related to characteristics of individual offenders (see, for example, Canter and Larkin 1993, Canter and Heritage 1990). From the results discussed in the previous section it can be seen that the same holds true in hostage taking situations. The fact that meaningful structures can be found when dealing with crimes carried out by a group rather than individual offenders indicates support for the hypothesis that groups establish ways of operating and that these can be identified through behavioural analysis.

Two central psychological issues when considering such patterns of activity are those of (1) consistency of behaviour and (2) development over time. Consistency refers to the stability of behaviour over time, whether an offender carries out characteristic actions during crimes at different times. Understanding consistency is vital to the task of linking crimes. Studies by Hammond (1990) and Canter and Heritage (1989) have indicated support for behavioural consistency.

Consideration of development over time is also necessary. It is suggested that criminal behaviour will systematically change over time. Research is currently being carried out looking at the nature of change in behaviour throughout a 'criminal career'. Cohort studies have indicated age variation in crime committed. Further, Holden (1993) found a distinct sub-group of offences carried out by younger offenders in the analysis of 63 murders. This suggests that the precise nature of crime varies with the age and experience of those committing it.

Having established a model of terrorist behaviour in a hostage taking event, the next stages are to consider the issues of consistency and development. Previous research on behavioural consistency has tended to focus upon the behaviour of individuals. The current research focuses on that of groups. Where individuals show consistency in their actions, groups, too, would be expected to maintain particular modes and styles of action. Crenshaw (1992) has likened terrorist groups to political organisations, with the implication of processes such as functional roles, hierarchy and common goals. Group processes are hypothesised to be the theoretical underpinning of consistency in group behaviour.

The consistency hypothesis can be addressed by considering events known to be carried out by identified terrorist groups. If the hypothesis is supported then events carried out by an individual group will be identifiable through the existence of common actions or behaviours linking them. Characteristic modes and patterns of behaviour are hypothesised to be evident in events carried out by a single group. Different groups would be expected to display qualitatively different patterns of behaviour. The work carried out on linking is directly addressing this issue.

Turning to the issue of behavioural development, many terrorist groups continue to be active for protracted periods of time. As individual criminals develop over time, so too should terrorist groups. It is hypothesised that groups are likely to alter their characteristic modes of action as a result of social and political change over time.

This hypothesis can be tested by analysis of the events of individual groups over a period of time. If support for consistency is found then core characteristics of a groups actions would be expected not to change very much. However, some aspects of behaviour may be expected to change with the experience gained from previous operations. For example, a group may consistently target single hostages to be taken from their homes. However, where initially they may stage an elaborate deception to gain access to their target they may decide to reduce their costs in terms of resources by the use of less covert raids.

9 - LINKING CRIMES

Having established an understanding of the behavioural processes and strategies in hostage taking, such information can be used as a basis for more specific applications of the data. One such is the linking of crime. A fundamental hypothesis in current investigative psychology is that an offender's behaviours are consistent and characteristic of that offender. If this is the case then these consistencies can be used to link crimes committed by that person.

Following from this, if individual criminals show consistency in behaviour then it is hypothesised that such will be the case for established groups too. Groups are typically composed of several people, thus widely expanding the possible repertoire of behaviours which can be drawn on. However, the development of group cohesion through a variety of psychological processes should mean that groups also tend to exhibit characteristic ways of operating.

A great deal of work has been carried out on linking with reference to serial rape. It has been shown empirically that while individual 'signature' behaviours are uncommon (Heritage 1992, in Jack 1994), consistency in behaviour is expressed through combinations of actions. As offenders are being hypothesised to show consistent modes of actions, or strategies, analytical techniques capable of representing the multidimensional nature of the information are necessary.

However, as well as the spatial plot indicating how the cases relate to each other, the way in which the cases differ in each category used in the profile is also given. This allows the nature of the interrelationships of the cases (or events) to be identified. This thus allows the identification of variables which can be used to link a series of events. MSA provides benefits over other analytic techniques by both indicating relationships statistically and by retaining the meaning of the information being analysed.

A considerable amount of work in field of criminal investigations into sexual attacks has shown that detectives decisions about the connections between offenses can be improved using a technique called Multidimensional Scalogram Analysis (Wilson and Canter 1992). The technique makes visible the multidimensional similarities and differences between offenders in terms of the way they behave during an offence.

However, to fully understand the task of linking it is of critical importance to understand the nature of behaviour itself; what aspects of behaviour are consistent across a series of offenses and which aspects develop and change. In terms of a research task, this is complex and time consuming. Work on sexual assaults is still in progress. The task of the current research was to assess whether there would be any potential in following up this type of work in the field of terrorist hostage taking.

To illustrate whether the techniques would work for hostage taking incidents two examples are presented. A sample of incidents are compared to one another on the basis of features of the incident within the terrorists control. By comparing the 'hostage taking style' of different incidents it is possible to show whether the MSA technique can distinguish between different groups on the basis of similarities and differences in what actually happened.

The technique used in this case is Multi-dimensional Scalogram Analysis (MSA). Where SSA correlates or compares the associations of variables across a number of cases, MSA works by comparing profiles of variables across cases. The more similar two profiles are the closer they are represented in space. MSA thus provides a visual representation of the interrelationships of the cases (in this case hostage taking events) based upon the categories chosen to make up the profile specified in the analysis.

9.1 - Example One: Hijacking

The first example is taken from the hostage taking data set and illustrates the difference between very well organised groups such as the PFLP in the late 60's and early 70's and other organisations operating at that time. In order to compare a number of incidents directly, several distinct groups of incidents were selected from the data base. These were; four incident known to have been carried out by the PFLP, four incidents thought to have been carried out by the PFLP, four incidents known to have been carried out by other organisations, and four incidents carried out by individuals who were not associated with a known terrorist organisation.

Each incident was coded according to 13 features of the hijacks which described the core features of the incident in terms of the choices made by the terrorists themselves. Each incident is therefore represented as a profile of 13 scores, representing in most cases, the presence or absence of a feature.

The data were analysed using Multidimensional Scalogram Analysis (MSA). MSA plots the incidents in such a way that the more similar the profiles, the closer together the incidents are in geometric space. Thus, incidents with a lot in common in behavioural terms will be located close together, and those with few similarities will be further apart.

The resulting plot is shown in Figure 17. The incidents carried out by the PFLP are shown on the left hand side of the plot, and are very close together. This indicates that all the incidents were very similar in terms of behaviours displayed. On the right hand side of the plot are the incidents which were carried out by individuals who were not associated with known terrorist groups. Here again there is a strong similarity between most of the incidents in terms of what happened. In the centre of the plot are the incidents carried out by other known organisations. The plot therefore shows a continuum from the most planned and well organised incident through to the least planned and more spontaneous incidents (Figure 18).

However, it is of particular interest to examine the location of the incidents thought to have been conducted by the PFLP. These four incidents can be found in the area of the plot between the incidents known to have been carried out by the PFLP and the incidents known to have been carried out by other organisations. This shows that the behaviour in these incidents had some consistencies with that expected from this organisation, but also had some important differences. This gives an external validation of the conclusions drawn by the authorities in attributing these incidents. However, it is of particular interest that two of the incidents, marked * on the plot, were denied by the PLO. It is these two incidents which are indeed closer to the incidents carried out by other groups and therefore lends some credibility to their claim that these were not hijacks for which they were responsible.

MSA of 16 Hijacks from the 1960's and 1970's
Partitioned According to Affiliation of Hijacker

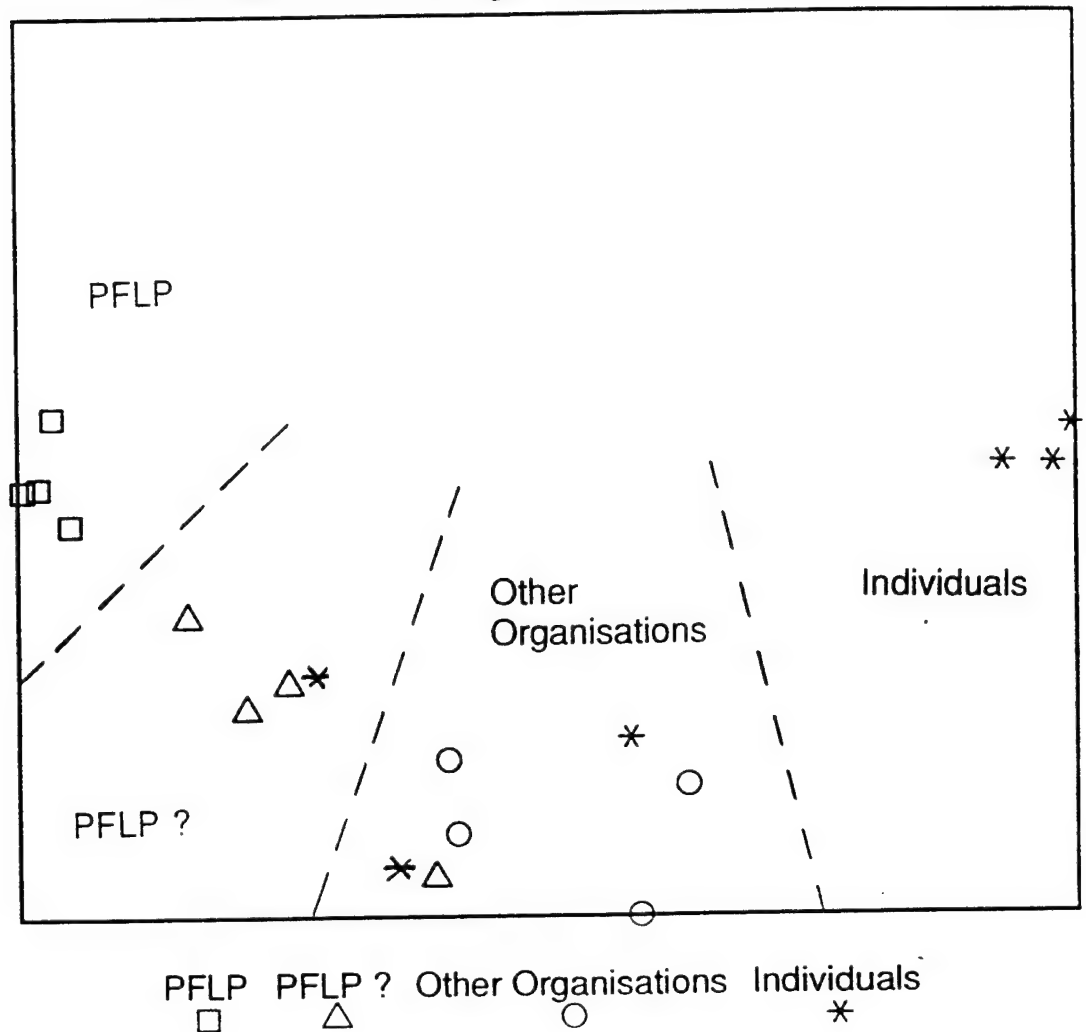


Figure 17

**MSA of 16 Hijacks from the 1960's and 1970's
Partitioned According to Affiliation of Hijacker**

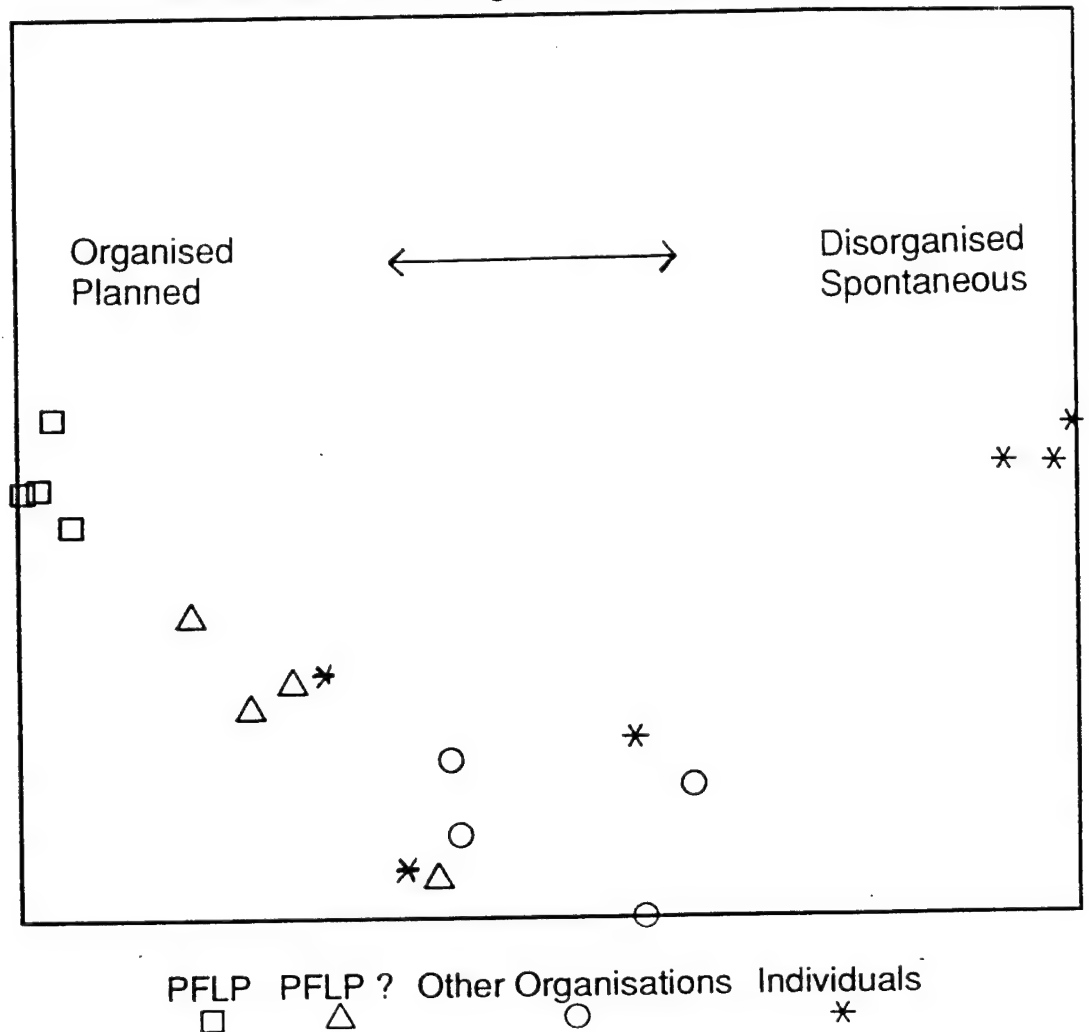


Figure 18

9.2 - Example Two: Sieges

The second example is taken from the Barricade-Siege data base. A sample of incidents were selected that had been carried out by the same organisations as part of ongoing campaigns. Five groups were used; The Japanese Red Army (JRA), The Armenian Revolutionary Army (ARA), Popular Revolutionary Bloc (BPR), Black September, and the South Moluccans. All of the incidents were coded according to 12 aspects of the sieges which were in the terrorists' control. The data were again analysed using MSA in the same way as described above.

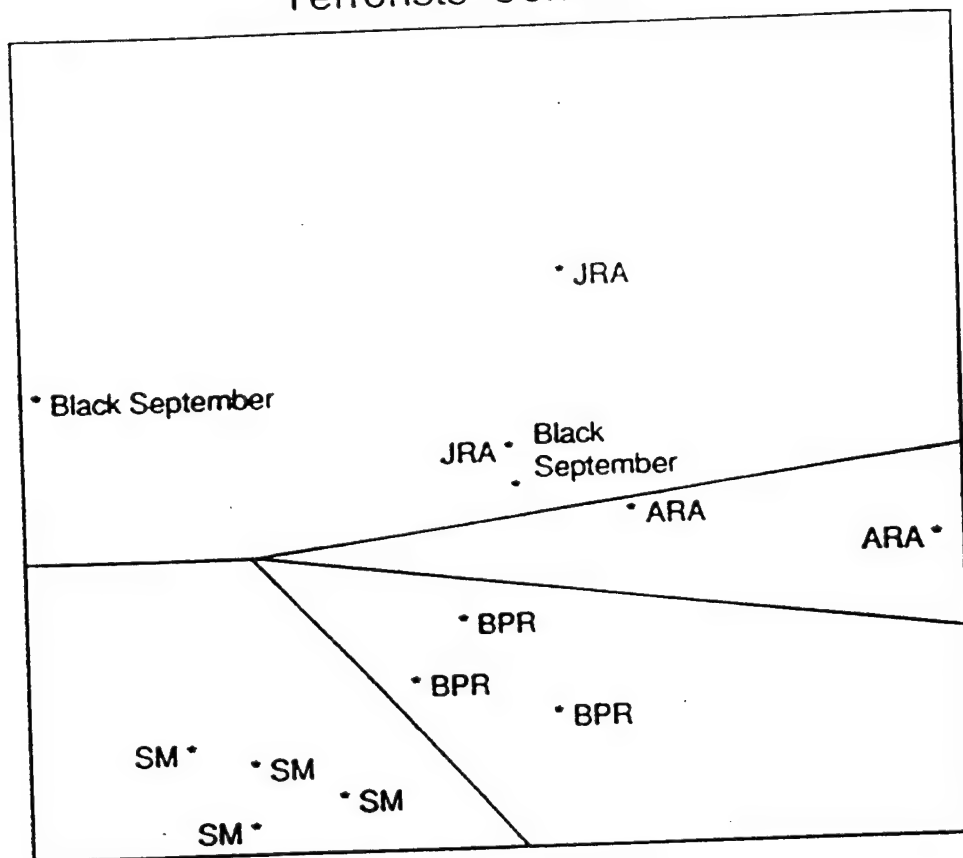
The results are shown in Figure 19. The plot shows clear regions which distinguish between the sieges carried out by the ARA, the BPR and the South Moluccans. This shows that these organisations maintained the same behavioral style in all of the incidents they carried out at that time.

However, of more interest is the region at the top of the plot which shows the incidents carried out by Black September and the JRA. There do not appear to be clear behavioural differences between these incidents as the sieges contain very similar styles of behaviour. This finding is particularly important, because according to Thomas Strenz of the FBI (1977) these two organisations were thought to have been training together at that time. The results therefore strongly support this theory, since they were carrying out hostage taking incidents which had great similarities in terms of the behaviour displayed.

Summary

The analysis has shown that, in principle, the analysis of consistencies in terrorist behaviour has great potential for the further understanding of terrorist activities. Major organisations tend to adopt a particular behavioural style, and these consistencies can be revealed using the representational techniques illustrated. However, a great deal more basic research needs to be undertaken into which features of hostage taking behaviour are likely to remain the same across time, and which are likely to develop and change.

MSA of Siege Style for Variables in the Terrorists' Control



JRA: Japanese Red Army
SM: South Moluccans

ARA: Armenian Revolutionary Army
BPR: Popular Revolutionary Bloc

Variables in the Terrorists' Control:

- | | |
|-----------------------------|-----------------------------|
| 1. Location of the Siege | 8. Mental Abuse of Hostages |
| 2. Nature of the Deadline | 9. Type of Guns |
| 3. Number of Terrorists | 10. Grenades |
| 4. Hostages Selected | 11. Explosives |
| 5. Means of Gaining Control | 12. Nature of the Threat |
| 6. Apparent General Motive | |
| 7. Hostages Tied | |

Figure 19

10 - CRIMINAL DEVELOPMENT

Having established that consistencies in behaviour can be identified, the next principle to consider is that of development. It is not reasonable to expect that all actions carried out by an offender or terrorist group will be consistent and identical between offences or events. Both situational demands and experience will lead to development in the actions exhibited. As discussed in the previous section on consistencies, what is necessary is consideration of which actions will remain consistent and which will change.

It has already been stated that it is not a prescribed set of behaviours which are expected to characterise an offender or terrorist group but a relatively stable underlying psychological framework. It is this psychological framework which will relate to the ranges and types of actions carried out. Thus very different individual actions could be exhibited during two different hostage taking events due to the situational specifics of each. What would be expected to be relatively consistent would be the general approach taken by any given group.

Factors such as previous experience of kidnapping, detailed planning, the induction of new members or changes in the hierarchy of a group can result in the psychological structure of a group to alter subtly with time. However, the effect of socialisation and group processes will ensure that at any given time changes are minimised. Changes to the overt behaviour of a group will result from these psychological changes and thus over a period of time some change in the manner of operation of a group will be expected. Thus the important task is to identify the stable, 'core', behaviours of a group resulting from stable and unchanging aspects of the psychological make up of a group and the relatively transient behaviours manifest in the development of that group.

Given the variety of factors playing a role in the psychological make-up of a group of hostage takers the initial approach to looking at development was to consider general patterns of behaviour over several decades. If variations in behaviour can be identified at the widest level of consideration then a rationale would be evident for looking more closely at the processes of change.

The following outlines the initial results from consideration of variation over time in hijacking. Events from the 60's through to the 90's were classified depending upon whether they fell into the first two decades (60's and 70's) or the second two decades (80 and 90's).

A number of changes were evident at this level of consideration, manifest by statistically significant results of Chi Squared tests. Looking at figure 20 over the page, it can be seen that the frequency with which aircraft of differing nationalities were hijacked altered significantly over time. In the first time period 35.5% of the hijackings were of United States aircraft, however, by the second time period this figure had fallen to only 7.3%. On the assumption that we have a representative sample of events in the database this indicates a large swing in the targetting of aircraft for hijacking. Similarly, the hijacking of Japanese aircraft fell from 11.1% to zero.

While there was no significant alteration in the frequency of hijacking of European aircraft, the hijacking of 'other' aircraft (for example Indian, Chinese or Russian) rose from 26.6% to 74.5%. This may reflect changes in geo-political unrest with time but also is likely to be

Changes In Hijack Behaviour Over Time

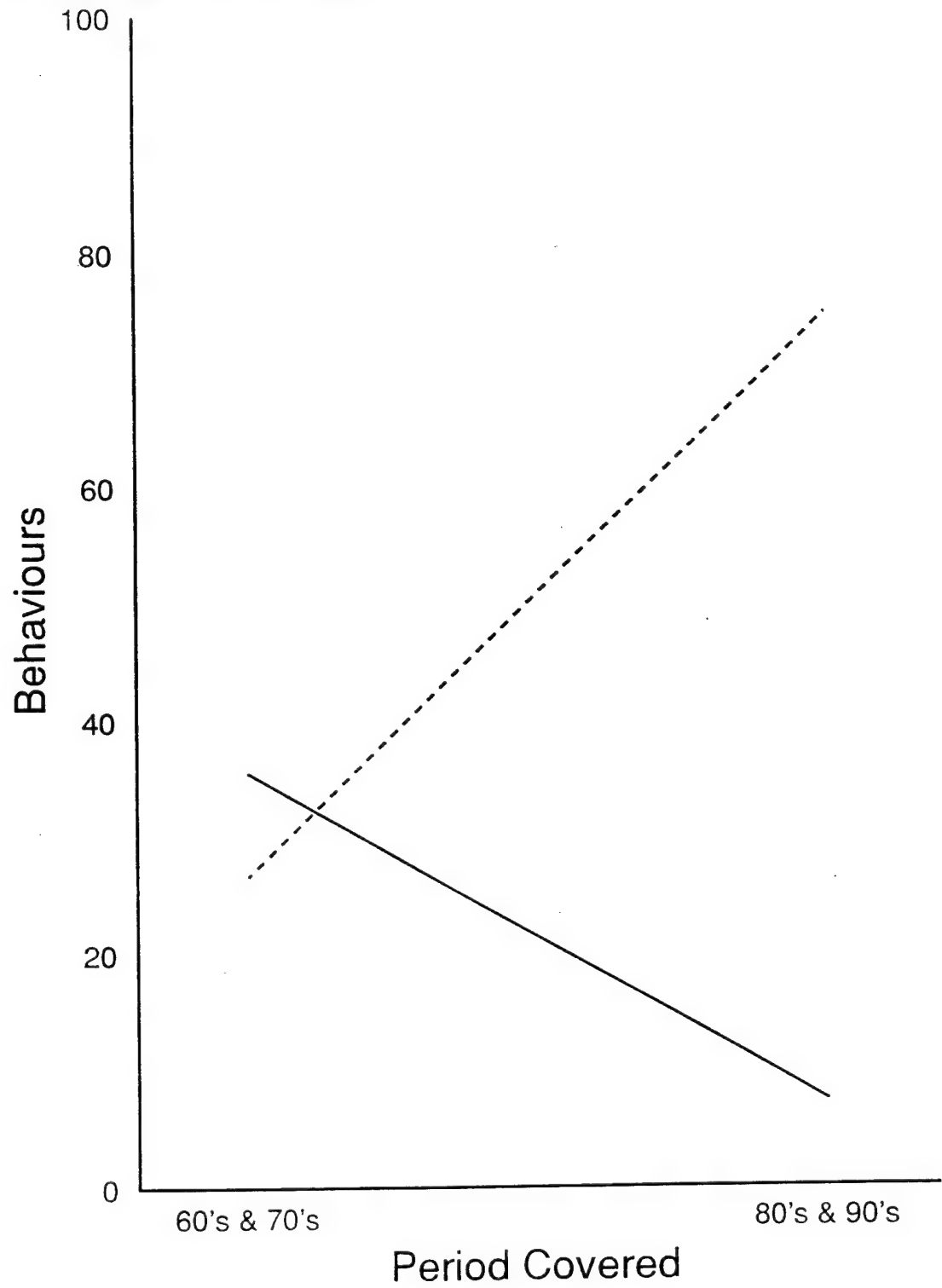


Figure 20

US Plane Other Planes

— - - - - -

due to concentrated target hardening on the part of many airlines, particularly those in the US airlines (eg. increasing airport security, installing metal detectors at departure gates etc).

Associated with a change in the target of attack was a general change in the nature of kidnappings, becoming more violent over time. This is illustrated in figure 21. In the earlier time period one strategy used to control the hostages was simply verbal commands, this was reported in 11 % of the cases. However, by the later period this strategy was not employed in any of the cases recorded. However, at the same time the willingness to use overt force increased as evidenced by the increase in spontaneous gun fire, rising from 8.8% of cases in the 60's and 70's to 29.1 % in the 80's and 90's.

At the same time the response of the authorities was to reduce the concessions being made to the hijackers. In the earlier period concessions were granted in 49 % of cases, however, by the later period such concessions were only made in 27.3 % of cases.

Such behavioural changes are likely to be the result of a large number of contributing factors. It is possible that widespread media coverage of early events will have provided information for unsophisticated copy-cat events in the 1960's and 70's (Holden, 1986). However, as terrorists and authorities gained experience of various different forms of dialogue, so various more sophisticated and potentially violent strategies may have developed - governments feeling that non-negotiation may be the only way to discourage further events and terrorists responding with increased violence to force the same governments to back down and resume negotiations.

Changes In Hijack Behaviour Over Time

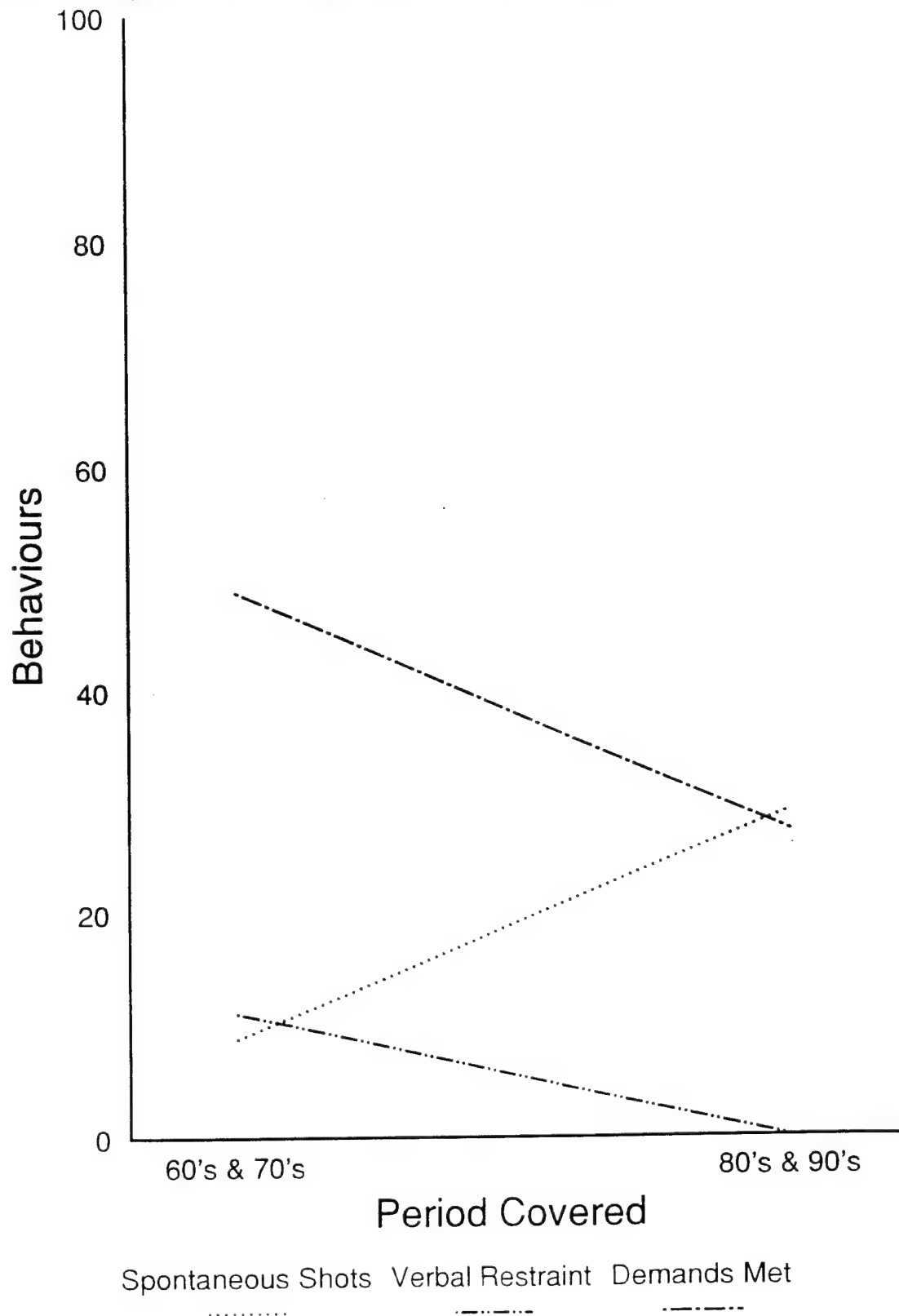


Figure 21

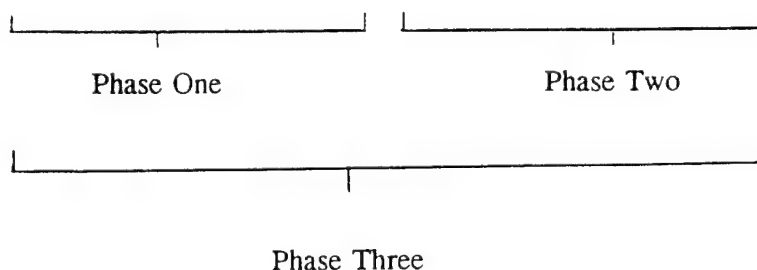
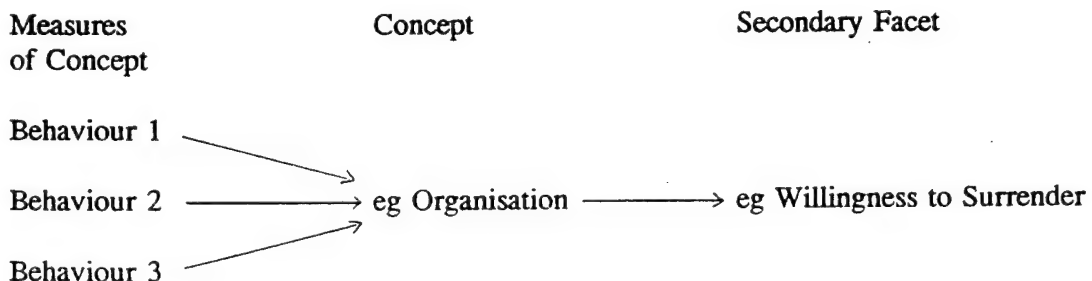
11 - PAST, PRESENT, FUTURE? ISSUES CONCERNING PREDICTION

Previous work in the field of criminal enquiries has illustrated that it is possible to predict an offender's criminal history from features of his behaviour in a target offence. Thus, aspects of the way he has developed through his criminal history are carried forward into the approach he takes to his current crimes. The following section will detail research into principle 4: Relating behaviour to criminal history. In this case the emphasis is switched from background information for use in investigation to future outcomes and their likelihood from differing negotiation strategies.

The current research has hypothesised that in the same way that behaviour can be used to indicate likely previous behaviour in terms of criminal history, it may be possible to predict future behaviour. This principle is derived from the notion of 'consistency'. In this way, certain aspects of behaviour can be hypothesised to be related to a particular psychological concept. For example, the concept 'organised' might be the underlying dimension on which a number of behaviours can be described. So for example, by starting an incident through a trick approach a particular group might be displaying a great deal of organisation. On the other hand, seizing random, non-targetted hostages displays a lack of organisation.

The research question is therefore twofold. First of all, which discrete features of behaviour are measures of which psychological concepts? Secondly, is it possible to relate other facets of a hostage taking incident, such as outcomes, to the same psychological concept? For example, one might expect that a well organised group would not be willing to release all their hostages as they are conceptualised as being 'currency' as the bargaining unfolds.

The relationship is thus;



In this way both current behaviour and future action may be hypothesised to be related to the same psychological concept. Once a number of behaviours have been shown to all be related to the same concept, it could then be possible to predict likely outcomes of a hostage taking incident from analysis of tangible features of an incident.

In order to establish these links, a great deal of basic research is necessary. However, our preliminary explorations indicate that research in this area holds great potential.

11.1 - 'Professionalism' of Hostage Taking in Barricade-Siege Incidents

It was hypothesised that a number of the features of behaviour in hostage taking were related to how well organised or planned an incident is. This has been termed 'professionalism'. The aim of the following analysis is to examine how the features of behaviour which potentially measure 'professionalism' relate to one another. For example, if one feature of professionalism is present will another also be present in an incident? Similarly, one might hypothesise that all the possible behavioural indicators of professionalism may form a cumulative scale, such that the most professional groups would possess all the features whilst the least professional possess none. An alternative hypothesis might be that there are qualitatively different types of professionalism, defined by different types of behaviour.

The current analysis took five possible measures of professionalism and analysed the way in which they co-occur across 60 incidents of barricade-siege. The measures selected for this analysis were;

Trick Approach: This indicates that the hostage takers gained access to the siege location by applying some kind of trick. Such an approach contrasts with storming the building by force and usually requires some form of intelligence about normal procedures.

Hostages Released on Humane Grounds: The release of women, children and the elderly, or of non targets such as embassy staff, is sometimes characteristic of hostage taking incidents. It has been suggested by several authors that well organised terrorist groups will place a high priority on public sympathy for their cause, and treat the incident in part as a means of gaining publicity. If this is true, it can be hypothesised that 'professional' hostage takers will not keep vulnerable hostages as this may lead to an adverse reaction from their target audience.

Hostages Mentally Abused: It can be hypothesised that poor treatment of the hostages will also lead to a lack of public sympathy for the hostage takers cause. In addition, poor treatment of the hostages suggests an 'unprofessional' approach in terms of the control the hostage takers have over the situation. Well organised groups should be able to maintain control of the situation without abuse of the hostages themselves.

Random Gunfire: The presence of random gunfire suggests that the terrorists are not able to maintain control through threat alone, and indicates a willingness to risk unnecessary deaths and injuries. This risks the negative consequences in terms of publicity outlined above.

Explicit Threat: the fact that an explicit threat was made was taken to indicate a certain level of pre-planning and a desire to start the negotiation process from a determined and apparently serious standpoint.

Construction of the Data Set

Each incident was coded as to whether or not the feature was present. Negative professionalism items were recoded, so that a '2' always means more professionalism than a '1'. Each incident was therefore represented by a row of scores or 'profile of scores' which described the hostage takers' behaviour in that incident.

The format of the data matrix is shown below:

Incidents of Barricade Siege	Professionalism Variables				
	A	B	C	D	E
1	1	2	2	1	1
2	1	1	2	1	2
3	1	1	1	2	2
4	2	2	1	2	2
n				

This data was analysed using Partial Order Scalogram Analysis (POSA). POSA plots the profiles as points in space according to the qualitative and quantitative differences between them.

Interpretation of the POSA Plots

The differences between the profiles can be characterised in two ways. Firstly they can be thought of in quantitative terms, ie the sum of the scores across the row. Such a measure would indicate how much professional behaviour was displayed by the hostage takers. A high total score would indicate a lot of professional behaviour and a low total score would indicate little or no professional behaviour.

In terms of the POSA plots, these quantitative similarities and differences are represented by the position of the points along the $x+y$ or 'joint' axis of the POSA plot. Figure 22 shows a set of example profiles which systematically vary on the quantitative scale, and are thus plotted along the $x+y$ axis.

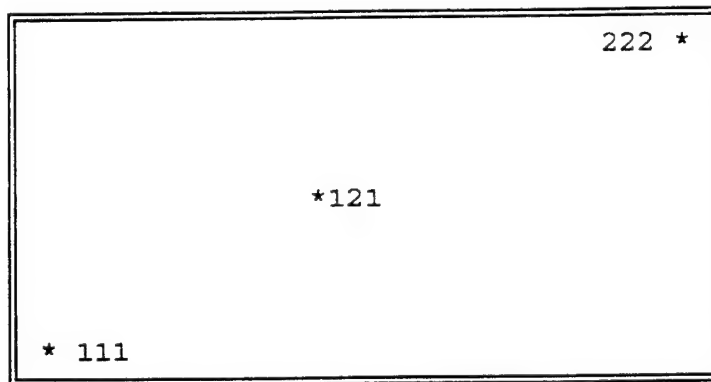


Figure 22. Sketch diagram of a POSA plotting quantitatively different profiles.

The qualitative differences between the projects are represented by the lateral, or $x-y$ axis. Figure 23 would represent a set of profiles which did not vary much quantitatively, ie the sum of the profiles were the same, but did vary qualitatively. This qualitative variation would be a result of different types of professionalism which did not necessarily form a cumulative scale.

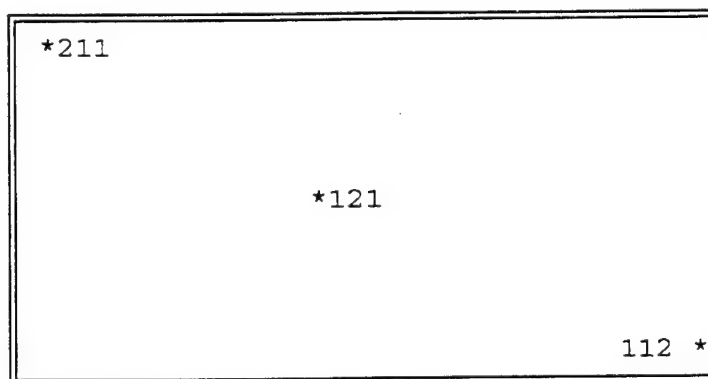


Figure 23. Sketch diagram of a POSA plotting qualitatively different profiles.

In this case then whilst the overall 'professionalism' scores is the same, ie it adds up to 4, it is achieved in qualitatively different ways. POSA represents the incidents in terms of both how professional they are overall and in terms of the different types of professionalism.

Results

Figure 24 shows the results of the POSA. The points in the first plot represent one or more incidents from the barricade-siege data base. The smaller, schematic plots illustrated in figure 25 show how each of the five professionalism variables work together to form a quantitative and qualitative scale of professionalism. Comparison of the way that the schematic plots relate to one another illustrates how the professionalism variables overlap empirically, indicated in figure 26.

Comparison of plots (a) and (b) (figure 25) show that in every case where a trick was used to gain entry to the premises the hostages were not mentally abused. Comparison of plot (c) shows that the partition for humane release is orthogonal to that of mental abuse and trickery. Therefore it is possible that hostage takers may be highly professional in that they have the intelligence to start an incident through deception, and do not abuse their hostages, however, they may or may not then go on to make humane releases of the hostages. In some cases of course, the hostage takers may have planned their mission so well that they do not have any vulnerable hostages to release, however, in most sieges non target hostages are present at the start of the take-over and must be released at some point in the incident.

The independence of 'no mental abuse' and 'humane release' shows that these two variables are indicative of qualitatively different types of professionalism. However, there are also a number of incidents where the hostage takers both did not abuse the hostage and also made some humane releases. These are to be considered the most professional in this sense. There are also a small number of incidents at the bottom right hand side of the plot where hostages were mentally abused and no humane releases took place. These incidents can be considered the least professional.

Finally, consideration of the plots relating to no random gunfire and explicit threat (plots (d) and (e), figure 25) show that those who were the most professional on each of these two behavioural features are also more likely to be those who do release hostages and who do not abuse them. The upper right hand quadrant then contains cases which are the most professional according to all the hypothesised variables. Thus these particular variables do appear to be relatively consistent measures of professional hostage taking, all being likely to occur in the same incidents. The only qualitative difference in behaviour comes at the intermediate level, where abuse and release distinguish two types of moderately professional incidents.

POSA plot of Incidents According to Professionalism Variables

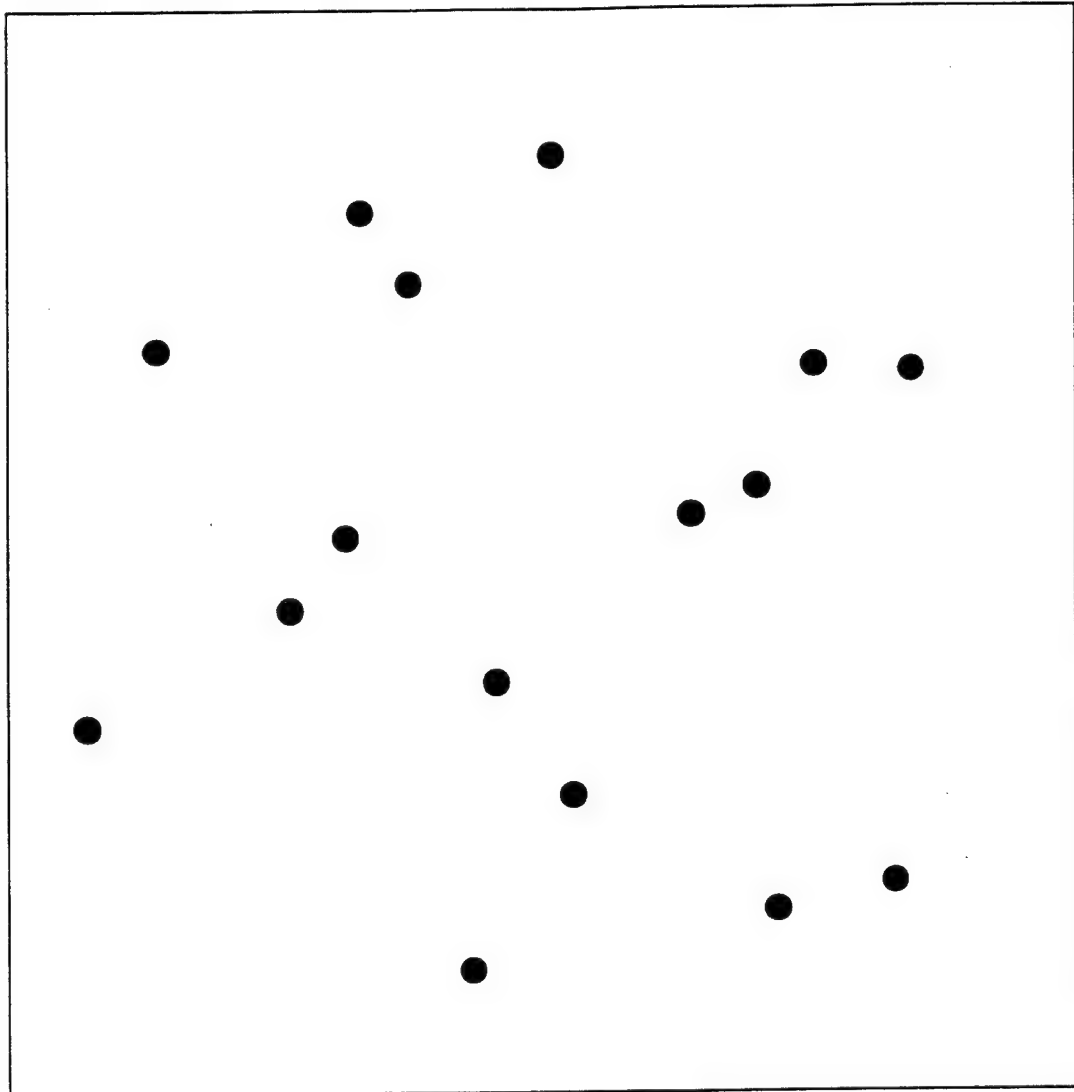
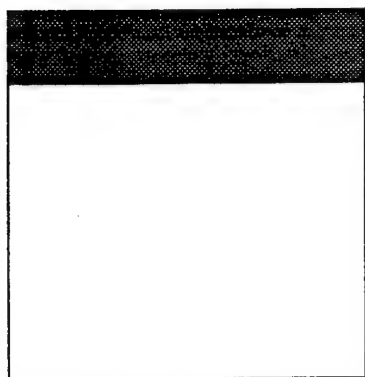
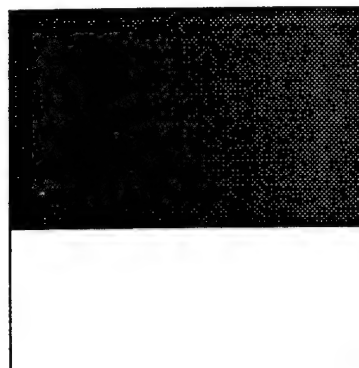


Figure 24

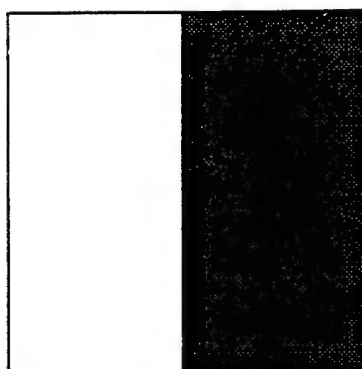
Schematic Diagrams Showing the Relationship Between the Professional Variables



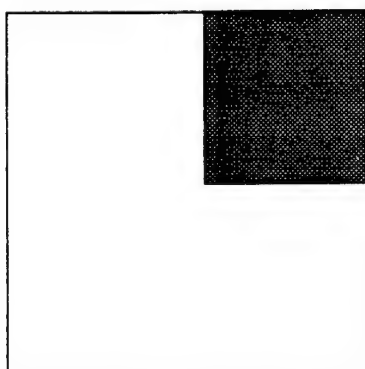
a) Trick Way In



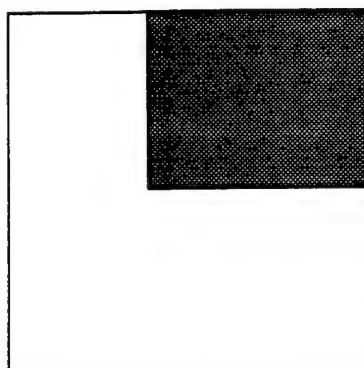
b) No Mental Abuse



c) Release Hostages for
Humanitarian Reasons



d) No Random Gunfire



e) Explicit Threat

Figure 25

Professionalism POSA Partitioned According to Four Hostage Taking Types

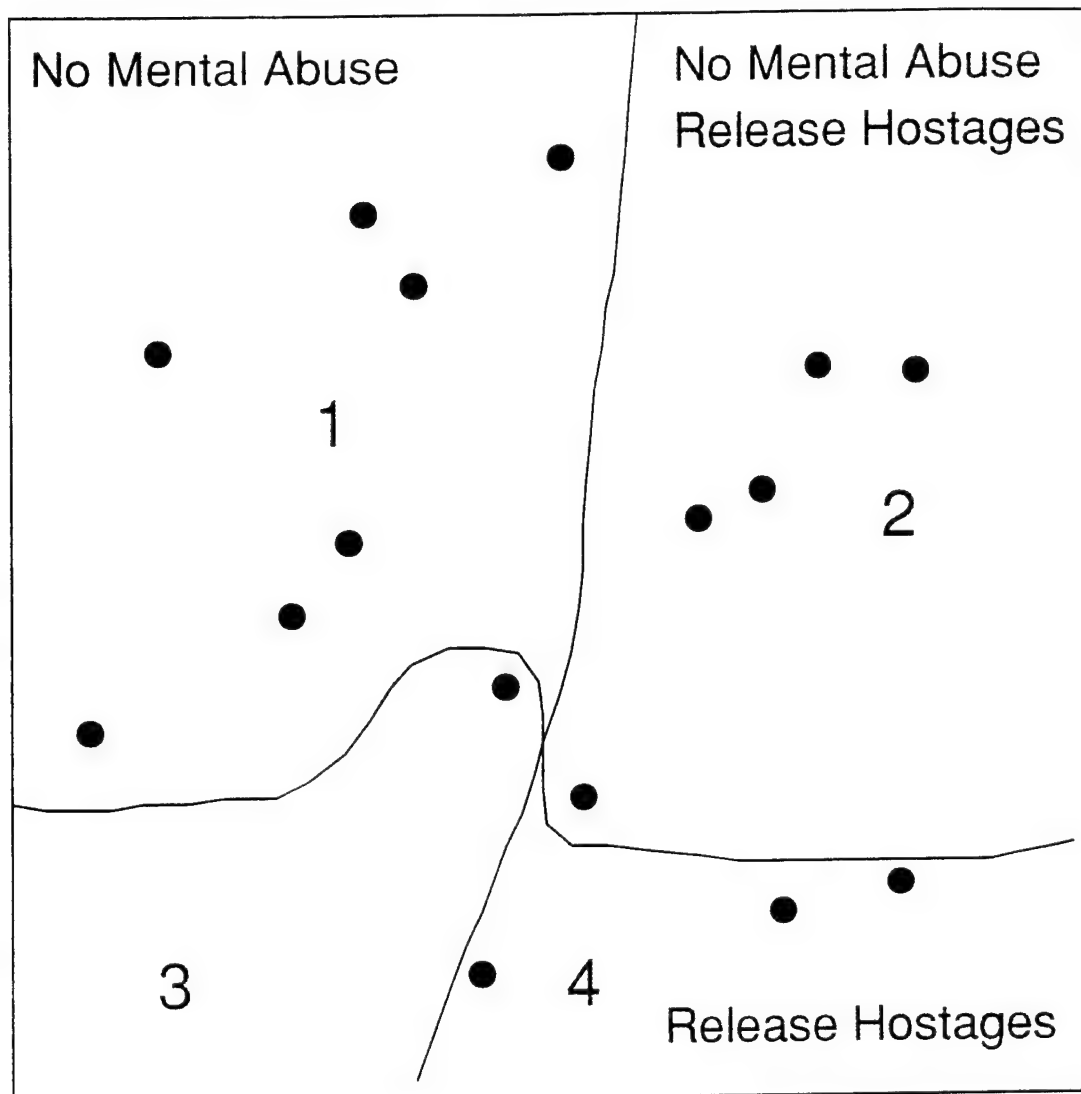


Figure 26

The pattern of relationships can be broadly divided into four quadrants, indicated in figure 26, which describe the most and least professional (Sectors 2 and 3 respectively) and the qualitative differences (Sectors 1 and 4). This model of the professionalism of siege hostage takers was used as a basis for further exploration of the likely outcomes of such incidents.

Cross Tabulation.

Each of the incidents was given a new code to indicate what type of incident it was considered to be on the basis of its location in the 'professionalism model', (1,2,3 or 4). Membership of each sector was then cross tabulated with a number of variables of interest to the decision makers in terms of the likely outcome of the incident. Since very few of the cases fell into regions 3 and 4 the discussion will centre on the difference between the highly professional groups and the groups who do not mentally abuse the hostages but who do not make releases on humanitarian grounds (Groups 1 and 2).

1. Physical Abuse There is no difference between the professionalism types in terms of the likelihood of physical abuse. Both group 1 and 2 hostage takers do not mentally abuse their hostages and mental and physical abuse are highly related.

2. Surrender Of the highly professional groups, 41.2 % surrendered, whereas the 28.5% of the none release group surrendered. Although this is not a statistically significant difference, it does indicate that the highly professional groups who are more likely to enter into negotiations with the authorities, are also more likely to surrender.

3. Concessions There is a highly statistically significant difference in the likelihood that the two professionalism types would make any concessions during the negotiation process. Thus the high professional group (2) almost all made some concessions to the negotiating process, through extending deadlines or lessening their demands, the none release group made far fewer. This reflects the increased negotiability of the professional group who will enter into some kind of bargaining frame with the authorities. It shows that the willingness to release hostages is highly associated with the willingness to make other concessions to the bargaining process.

Summary

In summary, the results have shown that groups can be classified according to how 'professional' or well organised they are in terms of the behaviour displayed. This professionalism also relates to the behaviour displayed by the terrorists in their dealings with the authorities. Groups who deal with their hostages in a 'professional'

way, are also more likely to concede certain aspects of their position during the bargaining phase of the incident.

The analysis has shown that it is possible to take a multivariate approach to classifying the incidents according to psychologically significant aspects of the hostage takers' behaviour. These multivariate models can then be used to predict the likely behaviour of the hostage takers as the incident unfolds. This area of the work holds considerable potential for future research and has implications for decision making in management and negotiation.

11.2 - Prediction of Negotiation and Outcome in Kidnap

In terrorist hostage taking details of the groups involved and possibly of their members are often available to the security services. What is usually of central concern in these situations is the control of the event and the prediction of outcomes based upon a knowledge of the events progress. This question can be addressed in a number of ways.

One way in which to gain an idea of the effects of different negotiation strategies and the resultant outcomes is to include aspects of these processes in further analysis of behaviour during an event. Taking the model of kidnappers behaviour discussed in section 7.2 (terrorist behaviour) a number of further categories relating to negotiation and outcome were added. The results of the SSA can be seen in figure 27.

The same general regions evident in the terrorist behaviour model can clearly be seen in this plot; forceful and rigid actions in the top left-hand region, non-forceful and rigid and the top right, forceful and flexible in the bottom left-hand region and non-forceful and flexible in the bottom right. The stability of this conceptual structure is further evidence of the consistency of the hypothesised underlying facets. During the following discussion it is important to remember that the regions represent general behavioural themes by which the categories can be associated, rather than clear cut differences in kidnap type.

Looking at the plot, general patterns of negotiation and outcome can be hypothesised. The type of behavioural pattern exhibited by the kidnappers may have an influence on the type of negotiation entered into and the resulting outcome. It must be stressed that the following discussion is of a tentative nature and more detailed analysis is necessary to elucidate the relationship between action and reaction more clearly.

It may be hypothesised that the more determined and rigidly goal oriented kidnappers are the less likely it is that anyone will negotiate with them. Refusal to negotiate is most strongly associated with kidnappers who exhibit rigid but mainly non-forceful behaviour. Rigid and forceful behaviour is also not met with a great deal of

Interaction of Terrorists and External Parties

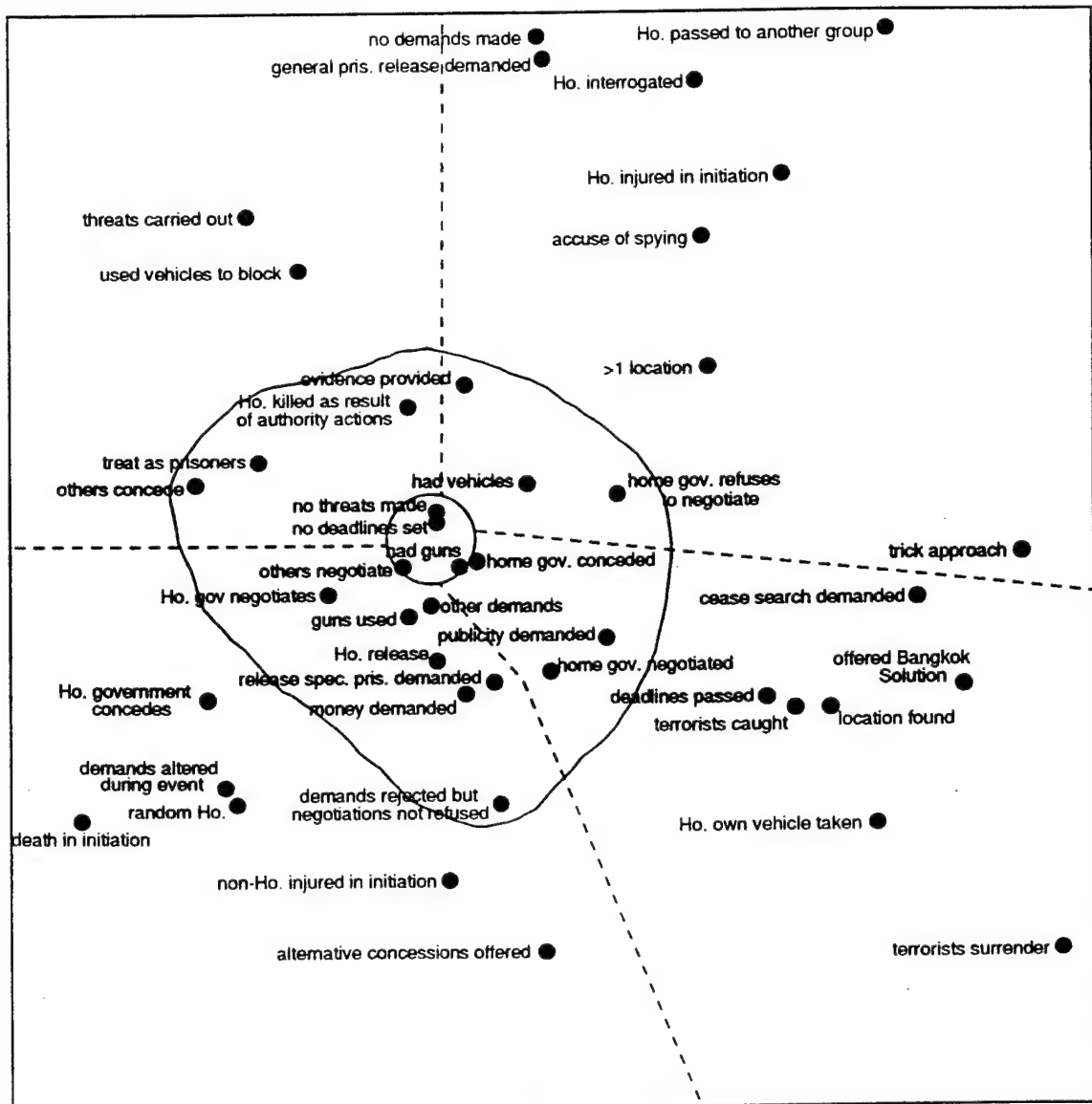


Figure 27

willingness to negotiate, but 'other' parties such as hostage's family and company or independent agencies such as the Red Cross may be more willing to play a role in negotiations if the threat to the hostages is more readily apparent.

It may be that determination and a single minded pursuit of stated goals is in fact detrimental to the kidnappers cause; lack of willingness to talk by the hostage takers being met with the same on the part of authorities. It is not possible to determine whether the terrorists rigidity makes external parties less likely to cooperate or whether uncooperative authorities lead to more dogmatic approaches from kidnappers. It is probably a combination of both, with socio-political context and prior experience of all parties having an effect on the dynamics of any given event.

It appears generally that the more flexible the kidnappers appear to be the more likely it is that various authority parties will feel able to negotiate with them. The behaviours indicating a willingness to use force though maintaining a degree of flexibility appear to be associated with negotiation and concession granting predominantly from the **hostages** government. Kidnappers behaving in a more flexible and non-forceful way tend to deal more often than not with the government of the country in which the event is being carried out.

As well as different types of negotiation, different types of outcome seem to be associated with different actions and interaction types. In the majority of cases in which negotiations were refused and none of the terrorist's demands are met there are two typical methods of event closure. The more forceful and determined groups may kill their hostages before getting away, while less forceful ones may release their hostages rather than killing them. It unfortunately appears to be the case that in such events determined terrorists 'close' the event before they can be located.

However, events in which the terrorists exhibit flexibility appear to be associated with a wider range of potential outcomes. As stated previously, negotiations are often entered with groups acting flexibly but forcefully, particularly by the hostages government. The widest range of negotiation strategies are associated with this type of action, from terrorists changing demands through to the authorities offering alternative concessions. Where concessions are made it seems to be typically the hostage's government.

The groups acting with most flexibility and least force are associated with the widest range of outcomes. The least committed groups appear to be characterised by actions in this region, as evidenced by the acceptance of the Bangkok Solution (dropping all demands and giving up the hostages in return for safe passage) or even surrendering themselves to the authorities. In addition, the least well prepared groups appear to fall into this region too, such actions being associated with the location of the kidnappers being found and the terrorists being caught.

Having discussed the apparent pattern of results it must be stated that more detailed analysis is necessary to look at the pattern of negotiation and outcome in more detail. The approach and results outlined above serves to give an overall perspective on the interrelationships of the terrorists action with the authorities responses in the broadest possible terms.

12 - COMPARISON WITH PAST CASES

Once the data base is established it is possible to consider a new case in comparison with old cases. The hijack data base contains 101 incidents from the 1960's through to the 1990's. This data base will be used to illustrate how a new case can be compared to the old.

In March 1993 the following description appeared in the South China Morning Post.

MONDAY, MARCH 29, 1993

Page 16 SOUTH CHINA MORNING POST



A passenger is reunited with his tearful daughter in New Delhi after the Indian Airlines plane he was on was hijacked and flown to Amritsar. Hijacker Hari Singh was protesting against corruption and religious violence.

Passengers support hijacker

NEW DELHI: A man who strapped a hair-dryer to his waist and hijacked a plane pretending he was a human bomb, has won a following among passengers who identified with his cause — to protest against corruption.

Hari Singh, 37, signed autographs for admiring passengers before giving himself up to police in the holy city of Amritsar, where the Indian Airlines plane was flown.

One passenger said he going to frame the auto-graph and hang it in his liv-

ing room. "Not many persons in this country can measure up to the courage Hari Singh displayed," he said.

Others described him as a "polite and mild-mannered man" who spoke excellent Hindi. They did not agree with the police version describing him as a crank "obsessed with nationalism".

"I don't mind being hostage of a man fighting corruption," the *Sunday Observer* quoted one of the 189 passengers as saying.

Singh, a resident of the northern state of Haryana, tried to commandeer the Airbus, on a Delhi-Madras flight, to the Pakistani city of Lahore where the plane was refused permission to land. It then flew to Amritsar.

The hijacker, who lectured his hostages on falling political standards and the evil of corruption and religious violence, emerged from the plane waving a flag emblazoned with the words "peace, goodwill and love".

He wore a shirt painted with caricatures of Indian

leaders, including Prime Minister Mr P. V. Narasimha Rao and opposition leader Mr Lal Krishan Advani, whom he professed to hold in disdain.

Also on his shirt were the slogans: "Stop corruption, save the nation" and "A true soldier of the country".

He complained to passengers how he had waited in vain for eight years to get a truck permit.

He had strapped to his waist a hair-dryer he passed off as a bomb.

Agence France Presse

Certain features of the hijacking could be extracted as being of significance in assessing the potential outcome of the incident. The hijacker had taken a domestic flight apparently for the purposes of publicising corruption and injustice. He did not possess any real weapons and was reported to be polite to the hostages whilst telling them about both his personal and political grievances.

In terms of the data base these translate into;

- 4 Polite
- 13 Other Weapons
- 14 Reveals Personal
- 16 Reveals Cause
- 35 Demands Publicity

The Smallest Space Analysis of 41 hijack behaviours is shown in Figure 28. Each possible behaviour is plotted as a point in space and the closer together two points are the more likely they are to co-occur in the sample of 101 incidents we have analysed.

The appropriate details for this particular hijack are shaded. The fact that these behaviours are found in the same region of the plot indicates that this pattern of events quite commonly co-occur in this type of hijacking.

There are other features of this type of hijacking which might be expected to be present. For example, it would not be surprising if the hijackers first move was to grab the stewardess (point 1), or if he had asked for safe passage from the incident (point 37). He may have revealed some details about the way he had planned the hijacking itself (point 15), given his tendency to reveal so much about the rest of his motivations. However, the account provided did not contain any information about these aspects of the hijack. This particular hijacker appeared to be in quite good spirits, but it would not be uncommon for him to be a more desperate man who expressed suicidal thoughts (point 17).

However, of particular relevance to the development of decision support systems for negotiators, in the close proximity of two further variables, **immediate release of all passengers** (point 25), and **surrender** (point 41). A reasonable prediction from the analysis of past cases would be that provided the hijackers was taken to the specified destination he would release the passengers and surrender to the authorities, his point having been made. The newspaper report suggests that this is what happened.

In order to use this type of model in an applied context, it would be necessary to ensure that a representative sample of as many incidents as possible were collated. The research work has suggested that establishing a more comprehensive data base of this nature and using representational techniques for prediction would have considerable value for training negotiators in behavioural analysis and its implications.

SSA of Hijackers Actions Only

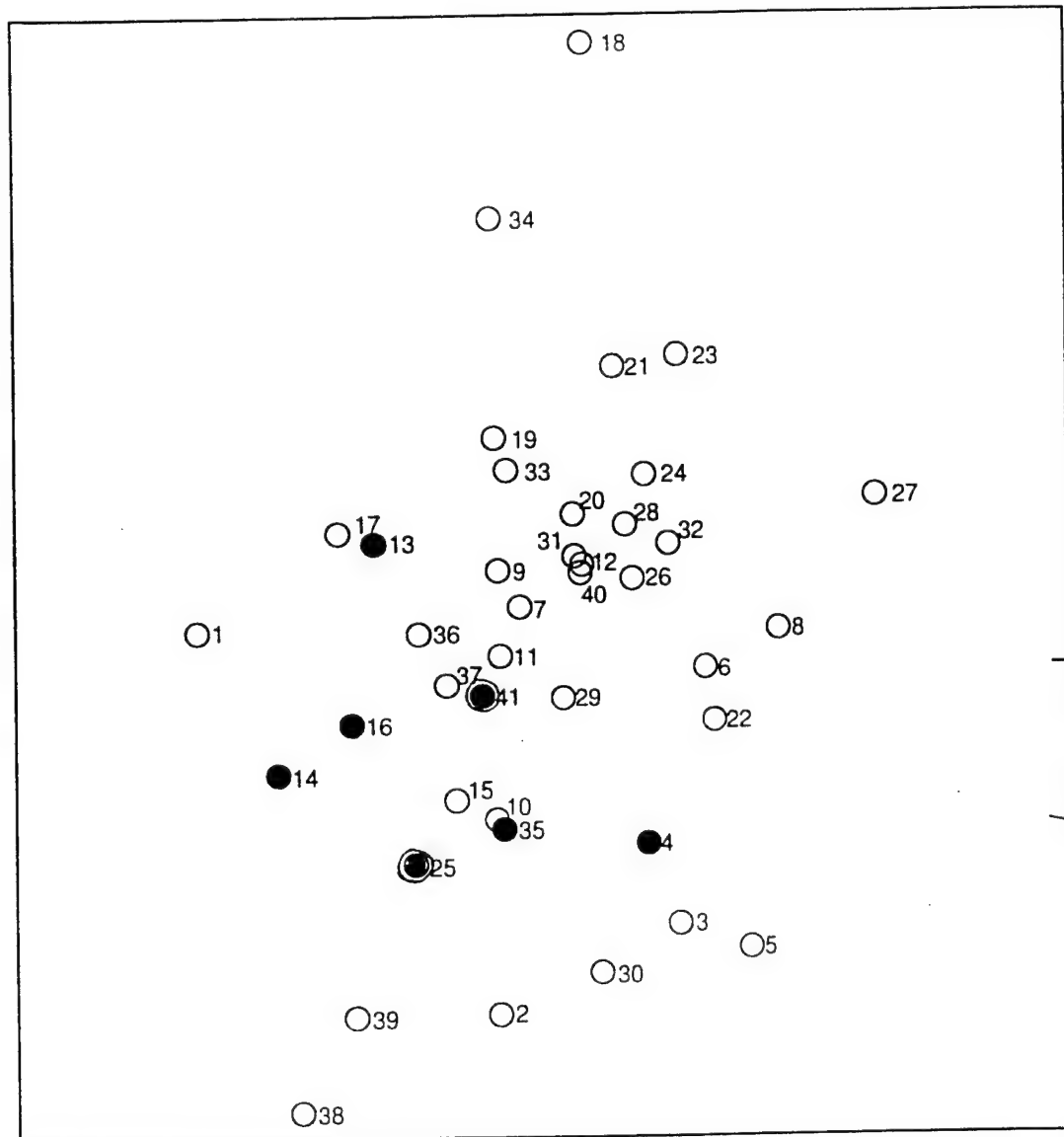


Figure 28

Hijack Data Item Numbers for Figure 28

- 1 Held up Stewardess
- 2 Passed note
- 3 Reassuring Message to passengers
- 4 Polite
- 5 Made radio broadcast
- 6 Deliberate damage to plane
- 7 Threatened damage to the plane
- 8 Hostages removed to another site
- 9 'Light' guns
- 10 Machine guns
- 11 Explosives
- 12 Grenades
- 13 Other weapons (Knives, swords etc)
- 14 Reveals personal
- 15 Reveals hijack
- 16 Reveals cause
- 17 Suicidal
- 18 Martyrdom
- 19 Shots fired forced
- 20 Spontaneous shots
- 21 Tied passengers
- 22 Verbal restraint of passengers
- 23 Threat controls passengers
- 24 Demoralisation
- 25 Immediate release of all passengers
- 26 Immediate release of "weak"
- 27 Immediate release of nationality
- 28 Compassionate release
- 29 Release later as negotiation
- 30 Release crew
- 31 Demand release of specific prisoners
- 32 Demand release of general prisoners
- 33 Demand money for self
- 34 Demand money for others
- 35 Demand for publicity
- 36 Demand travel per se
- 37 Demand safe passage
- 38 Accept Bangkok solution
- 39 Lessen demands
- 40 Let deadlines pass
- 41 Surrendered

13 - CONCLUSION

It is clear from the preceding chapters outlining the research into each of the principles that support is indeed indicated. Clear and consistent models of behavioral variation can be seen in each of the hostage taking strategies. This indicates that within each strategy there are a range of possible modes of action which can in turn be used to indicate the nature of those involved in the events. The establishment of clear models of hostage taking is perhaps the crux of the research. Having found that there are distinct patterns in the actions exhibited by hostage takers it is possible to further examine the remaining four principles, those of consistency, development, prediction and comparison of behaviour.

The analysis has shown that it is possible to take a multivariate approach to classifying the incidents according to psychologically significant aspects of the hostage takers' behaviour. These multivariate models can then be used to predict the likely behaviour of the hostage takers as the incident unfolds. This area of the work holds considerable potential for future research and has implications for decision making in management and negotiation.

The analysis has shown that, in principle, the analysis of consistencies in terrorist behaviour has great potential for the further understanding of terrorist activities. Major organisations tend to adopt a particular behavioural style, and these consistencies can be revealed using the representational techniques discussed. However, a great deal more basic research needs to be undertaken into which features of hostage taking behaviour are likely to remain the same across time and which are likely to develop and change. It has been shown that for any given group it is not a discrete cluster of behaviours which are consistent across events, but complex patterns of types of behaviour. While situational characteristics may mitigate against the same actions occurring twice, it is proposed (and empirically supported) that it is the 'technique' or mode of operation which remains consistent.

Development can also be seen within the actions carried out during hostage taking. With experience and planning groups can be seen to alter their behaviour over time. At a general level wide-ranging changes in the nature of events are influenced by negotiation patterns. Up to the relatively recent past hostage takers typically used less force and were likely to receive more concessions. However, during the 1970's and 1980's many governments adopted harder anti-terrorist strategies in order to clamp down on a potentially escalating problem with the probable result that serious terrorists felt they had to use greater violence to force the hands of the authorities.

Research in serial rape has indicated that criminal development does not follow one definite path, but that progression can proceed in a number of directions, depending upon a range of factors. Having established at a general level that there has been development in hostage taking it is necessary to look in greater detail at the nature of development. It is important to look at what facets of a groups behaviour are likely to remain consistent and what facets are likely to transform over time, and in what manner.

The detailed establishment of the principles of consistency and development may help in understanding in more detail the nature of the complex behavioural dynamics which make up any hostage taking event. The fourth principle relates to the prediction of various factors from a knowledge of the nature of the actions expressed during an event. In criminal

investigation it is useful to predict background characteristics of the offender in order to assist the apprehension of that person. In the course of negotiating with hostage takers it is more fruitful to focus on prediction of the likely response to various negotiation strategies, with the ultimate aim of being able to control events through the prediction of minimum cost outcomes.

Support for this principle indicates the potential prediction of factors of direct relevance to those who manage and negotiate with hostage takers. The models developed can be used to test possible hypotheses concerning the outcomes of a variety of incidents. The models provide a theoretical starting point for developing practical implications. These implications can be derived from tangible, observable features of an incident which are known to the authorities very early on in an incident.

Finally, it has been shown that the databases can be used to compare previous events with current ones. The final chapter outlined how the models can be used to relate information held on previous events to that of more recent ones. Of further importance is the ability to readily indicate other types of action which may or may not be present, and using this information to make predictions of the potential outcomes of a range of intervention strategies.

It can thus be seen from the previous chapters that all five of the principles have been addressed, and that as for other types of crime, hostage taking can be seen to have a clear structure in the behaviour of the participants. From this it is clear that a detailed understanding of the complex interrelationships of factors playing a part in any given event can be revealed through systematic empirical research. Evidence has been provided of the utility of each of the principles and it is now necessary to focus in more detail on each of the principles to further elucidate the processes occurring in hostage taking events.

POSTSCRIPT

With the support of the U.S. Army Research Institute, through it's European Office, further development of the principles of application of behavioural information in hostage taking will continue. While the authors are no longer based at the University of Surrey research will continue at the University of Liverpool. The authors can be contacted at:

University of Liverpool
PO Box 147
Liverpool L69 3BX
UK

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APPENDICES

The following appendices contain the checklists and the date lists used in the generation of the databases employed in the research discussed in the preceding report. At the time of writing the kidnap and hijack databases hold the details of one hundred events and the barricade-siege database the details of 80 events. The lower number of sieges coded reflects a lower incidence of siege as a hostage taking strategy.

The checklists illustrated show the most current stage of development of the theoretical frameworks proposed to underlie the different forms of hostage taking. Information accumulated and developed through analysis of the databases is used to allow iterative development of the frameworks. This enables continual modifications to be made to the frameworks during the course of the research, permitting the continual improvement of both the theoretical structure and the comprehension of the processes occurring during these events.

Appendix A

Barricade-Seige Checklist and Dates

Provisional Working Barricade-Seige Coding Frame

Notes on Use

SECTION 1 : TAKEOVER

V1. Location

The target is the primary location (building) at which the hostages are seized and held. Where hostages are moved at a later stage the target remains the first location which is besieged.

- 1 = Middle Eastern Embassy or Consulate
- 2 = US Embassy or Consulate
- 3 = European Embassy or Consulate
- 4 = South American Embassy or Consulate
- 5 = A Public Place
- 6 = An Office or Government Meeting
- 7 = Some other embassy
- 8 = An official's home
- 9 = Other

V2. Type of Take-over

The take-over is the way in which the terrorists initially seize the target place.

- 1 = Tricked their way in
- 2 = violent entry/surprise attack (or don't know)
- 3 = Got in through part of some procedure

V3. Number of people (terrorists)

The number of terrorists who were initially involved at the outset of the siege.

- 1 = One person
- 2 = 2/3 people
- 3 = 4/5 people
- 4 = 5-10 people
- 5 = 11-25 people
- 6 = 26-50
- 7 = 51-100
- 8 = 101 + /Indeterminately large
- 9 = Unknown

V4 Out to take specific person or people

Were the terrorists intent on taking a particular person or persons hostage (often named), as opposed to taking whoever they found at the target place. It does not refer to individuals determined by place such as ambassadors unless stated.

- 1 = no/unclear
- 2 = yes

V5. The Target (hostages)

This refers to the actual person or persons taken hostage by the terrorists. They are usually held on the basis of some criteria such as VIP status, while non targets refers to those people who are not held by the terrorists because of some kind of affiliation or who are of no 'value'.

- 1 = Only took specific people
- 2 = Took everyone then let non target people go (eg non officials, non Israelis)
- 3 = Just kept everyone they could get hold of.
- 4 = Took specific targets and anyone else they found.

V6 Means of gaining control

The way in which the terrorists exert their control over the persons who are to be the hostages.

- 1 = Threat alone (no injuries) or don't know.
- 2 = Firing guns randomly (with possible injuries)
- 3 = killed someone straight off

SECTION 2 : MOTIVATION AND DEMANDS

V7 Primary apparent motive

This is a general categorisation as to the apparent underlying motives for the seige. The motive was taken as political if the terrorists were concerned with land or perceived injustice.

It was considered personal if the siege was primarily for personal gain.

It was considered religious if the siege was primarily over differing religious perspectives.

- 1 = Political
- 2 = Personal
- 3 = Religious

V8 Demanded Money for themselves

Money was demanded for themselves if they asked for it to be directly paid to them.

- 1 = no
- 2 = yes

V9 Demanded money for others

Money was demanded for others if the terrorists asked for it to be paid to other individuals or an organisation.

- 1 = no
- 2 = yes

V10 Demanded Prisoners Released (Specific People)

Specific prisoners are those who are named or if the terrorists asked for a specific small number of prisoners, implying specific individuals.

- 1 = no
- 2 = yes

V11 Demanded Prisoners Released (General)

General prisoners are usually groups of indeterminate number, often held en masse for political/religious reasons (often for no particular crime)

- 1 = no
- 2 = yes

V12 Demanded Publicity (Radio/tv broadcast)

- 1 = no
- 2 = yes

V13 Demanded Publicity (Newspaper)

- 1 = no
- 2 = yes

V14 Demanded Publicity (Other or do not know what type)

All publicity refers to explicit statements of demands for media attention.

- 1 = no
- 2 = yes

V15 Demanded Political Change

This refers to the explicit request for change which is usually political; the variable was also taken to include any other form of social or religious change or if the terrorists were making a point about present circumstances in their country, and included a demand for change.

- 1 = no
- 2 = yes

V16 Demanded Travel (as Safe Passage from incident)

Travel was considered as safe passage, when it was an adjunct to other demands and clearly a means of escape.

- 1 = no
- 2 = yes

V17 Demanded Travel for its own sake (selves)

Travel was for its own sake if the terrorists demanded it primarily because they wanted to travel to a specific destination with a reason for wanting to get there, and not just to escape.

- 1 = no
- 2 = yes

V18 Demanded travel for its own sake (others)

Travel for others, referred to the translocation of persons named by the terrorists (often released prisoners). It was implied if released prisoners were to escort the terrorists out of the country.

- 1 = no
- 2 = yes

SECTION 3 : MAIN EVENT - CONTROL AND ACTIONS

V19 Bangkok Solution Offered to Terrorists/ (Safe Passage offered)

Best explained on P367 of Mickolus' Transnational Terrorism 1968-79.
Essentially it is a peaceful resolution offered by a Government to a terrorist, or group, whereby the hostages are released in return for safe passage out of the country.

- 1 = no
- 2 = yes

V20 Fate of the Captors

The fate of the captors refers to the outcome for the terrorists at the end of the siege.

- 1 = Accepted Bangkok Solution/ safe passage
- 2 = Surrendered
- 3 = Forcibly arrested (with possible deaths and injuries)
- 4 = Escaped or allowed to go free
- 5 = All killed

V21 Hostages physically abused or injured

Physical abuse or injury where stated refers to the terrorists treatment of the hostages during the siege. The distinction between physical abuse as control and unnecessary abuse, lies in the interpretation. Here abuse is considered unnecessary if injuries are inflicted by the terrorists when it need not be, and is often carried out malevolently. Abuse/injuries incurred by the hostages in an attempt to escape or to thwart the terrorists would be control.

- 1 = no
- 2 = only to control them
- 3 = unnecessarily
- 4 = yes but don't know why

V22 Hostages mentally abused or demoralised

Mental abuse was taken to include all forms of non-physical abuse from verbal taunting of hostages to the unnecessary enforcement of demoralising activities.

- 1 = no
- 2 = yes

V23 Outcome for the hostages (death)

This refers to the consequences of the siege in terms of hostage fatalities.

- 1 = all killed
- 2 = some killed
- 3 = none killed
- 4 = not applicable

V24 Outcome for the hostages (Injury)

This refers to the consequence of the siege in terms of hostage casualties

- 1 = all injured
- 2 = some injured
- 3 = none injured
- 4 = not applicable

V25 Were the hostages injured as a direct result of government action

This refers to the outcome for the hostages as a consequence of intervention from the government, where applicable; often involving the use of an anti-terrorist squad to storm the building or a refusal to negotiate with the terrorists.

- 1 = no
- 2 = yes

V26 Who by ?

If injuries resulted as a consequence of government action, who was responsible for inflicting the injuries. If hostages are killed/injured in general cross fire it is taken that the responsibility is unknown.

- 1 = terrorists
- 2 = authorities
- 3 = unknown
- 4 = N/A

V27 Guns (Did they have them?)

This broad classification indicates whether or not the terrorists carried firearms, which may have been stated in the text or implied by shots being fired.

- 1 = no
- 2 = yes
- 3 = D.K

V28 Guns (Type)

Heavy weaponry generally implied machine guns, but included any type of assault weapon that was capable of equivalent damage. Light weaponry refers to all types of rifle or pistol, including automatics.

- 1 = Heavy weaponry (machine guns or other heavy weaponry)
- 2 = Light weaponry (rifles, pistols etc)
- 3 = D.K /indeterminate
- 4 = Both heavy and light weaponry
- 5 = N/A

V29 Grenades

Was there evidence that the terrorists had hand grenades, whether stated or implied.

- 1 = no
- 2 = yes

V30 Explosives

Was there evidence that the terrorists had any form of explosive compound (including Molotov cocktails), whether stated or implied by the threat to blow up the building.

- 1 = no/don't know
- 2 = yes/implied

V31 Knives/Swords/other wielded weapons.

Were the terrorists armed with other weapons other than guns.

- 1 = no
- 2 = yes

V32 How many were held ?

This refers to the number of hostages taken by the terrorists, not including those released immediately after the take-over (non-targets).

- 1 = 1
- 2 = 2-10
- 3 = 11-20
- 4 = 21-50
- 5 = 51-100
- 6 = 101 +
- 7 = 1000 +
- 8 = Unknown

V33 Nature of the Threat

What was the terrorists' statement of intent in order to get their demands met.

- 1 = To blow up the building
- 2 = to kill the targets
- 3 = no apparent threat
- 4 = kill the hostages and blow up the place

V34 Type of deadline given by captors

The deadline refers to the time the terrorists want their demands to be fulfilled by, after which they will carry out their threats. Some of these categories were inclusive of the threats.

- 1 = Short deadline given (< 6 hours)
- 2 = Next day deadline or within 24 hours
- 3 = no apparent deadline was set
- 4 = deadline was that someone would be killed every x hours
- 5 = A deadline was set but we don't know what it was.
- 6 = A longer term deadline (> 24hours)
- 7 = Set deadline, after which people would be killed every x hours.

V35 Were the hostages tied ?

This refers to binding of any form for any length of time.

- 1 = no/ D.K.
- 2 = yes

V36 Did the captors communicate with their leaders elsewhere ?

Was there evidence that the terrorists were in contact with their controllers, but was also taken to include communicating with compatriots or allies elsewhere.

- 1 = no
- 2 = yes

V37 Did the government or other authority say they would not negotiate

This refers to the intervention on the part of the authorities in terms of their willingness to arrive at a resolution; it was coded as yes if the government made a direct statement or implied it by a refusal to meet any demands.

- 1 = no
- 2 = yes

V38 How ?

How did the government transfer their message of an unwillingness to negotiate, if applicable.

- 1 = public statement
- 2 = to the terrorists
- 3 = N/A
- 4 = As general policy/D.K./no specific statement.

V39 Was the building stormed ?

This refers to action on the part of the authorities to forcefully resolve the siege by sending in a military team to save the hostages and either arrest or kill the terrorists.

- 1 = no
- 2 = yes

V40 Did the captors let deadlines pass ?

The terrorists were taken to have let deadlines pass either if this was stated in the account, or if it was implied by them not having carried out their threats after the deadline.

- 1 = no
- 2 = yes
- 3 = N/A

V41 Were any hostages released after the initial takeover ?

This refers to the freeing of captives who had actually been held by the terrorists and not those immediately released upon takeover (non targets), or those allowed to go due to injuries sustained in the initial assault.

- 1 = no
- 2 = yes

V42 Hostages released as part of negotiations

- 1 = No
- 2 = Yes
- 3 = N/A

V43 Hostages released on medical/humanitarian grounds

- 1 = No
- 2 = Yes
- 3 = N/A

V44 Hostages released on basis of their gender/vulnerability

- 1 = No
- 2 = Yes
- 3 = N/A

V45 Hostages released on the basis of thier nationality

- 1 = No
- 2 = Yes
- 3 = N/A

V46 Some hostages released spontaneously, on no particular basis

- 1 = No
- 2 = Yes
- 3 = N/A

V47 Did the captors lessen their demands ?

Did the terrorists make any reductions in their initial demands for bargaining purposes.

- 1=no
- 2=yes
- 3=N/A

V48 Did the captors backdown completely ?

This broad classification indicates a submission on the part of the terrorists, dropping all demands and releasing all of the hostages. The outcome for the terrorists may be either surrender, escape or accepting the Bangkok solution.

- 1=no
- 2=yes

V49 Were the captors demands met ?

Completely meeting the demands of the terrorists was taken to mean the total fulfilment of their requests, or as near to it as was acceptable to the terrorists. All other fulfilment was partial.

- 1=completely
- 2=partially
- 3=not at all
- 4=no but they got away

V50 Did the captors make any concessions at all ?

Concessions were taken to mean any actions on the part of the terrorists which demonstrated a willingness to arrive at a mutually satisfactory outcome.

- 1 = no
- 2 = yes

V51 Did they allow medical attention ?

This was applicable to sieges where hostages were physically injured as a result of the terrorists actions and not applicable to hostages who simply became ill. It was also not applicable to those people who may have been injured during an initial assault, but were not taken hostage.

- 1 = no
- 2 = yes
- 3 = not applicable

V52 Did the scene get moved somewhere else

Did the terrorists move the hostages to a location other than the original place seized.

- 1 = no
- 2 = considered it
- 3 = yes

V53 Terrorist Bluffing

Bluffing refers to those actions on the part of the terrorists which served to deceive or attempt to deceive the authorities, for whatever reason.

- 1 = no
- 2 = yes

V54 Breaking the rules

Generally refers to actions on the part of the terrorists which constitutes a breach of prior agreements, or an infringement of the implied rules of the incident.

- 1 = no
- 2 = yes

V55 Length of siege

This refers to the total duration of the incident from onset to resolution.

- 1 = < 6 hours
- 2 = > 6 hours - < 24 hours
- 3 = 2/3 days
- 4 = 4 days - 1 week
- 5 = 8 days - 2 weeks
- 6 = > 2 weeks

Barricade-Seige Event Dates

<u>Case No</u>	<u>Date</u>
26	09 06 70
61	18 02 72
55	05 09 72
01	28 12 72
02	01 03 73
25	19 07 73
03	05 09 73
24	28 09 73
23	18 10 73
57	06 02 74
04	13 09 74
22	27 09 74
21	26 10 74
05	18 11 74
06	27 12 74
07	19 01 75
27	05 03 75
62	23 03 75
08	24 04 75
56	28 04 75
09	04 08 75
63	15 09 75
28	28 09 75
29	08 10 75
64	02 12 75
10	04 12 75
58	06 12 75
11	21 12 75
30	23 02 76
65	09 03 76
12	26 09 76
31	11 10 76
66	20 02 77
13	09 03 77
14	09 03 77
15	09 03 77
32	23 05 77
33	23 05 77
54	03 02 78
34	13 03 78
35	03 07 78
36	31 07 78
37	17 08 78
16	22 08 78
38	16 01 79
39	14 02 79
17	11 05 79
18	04 05 79
19	13 07 79
67	04 11 79
20	20 11 79
68	02 01 80
40	11 01 80
69	25 01 80
59	31 01 80
41	05 02 80
70	05 02 80
71	06 02 80
72	13 02 80
42	18 02 80

43	27 02 80
73	27 03 80
44	30 04 80
45	17 09 80
46	24 09 81
60	12 05 82
47	06 09 82
48	17 09 82
74	03 11 82
49	22 12 82
50	27 07 83
51	12 03 85
52	06 11 85
53	19 12 85
75	08 09 86
76	13 12 86
77	10 09 87
78	13 05 93
79	24 06 93
80	24 06 93
81	05 07 93

Appendix B

Aerial Hijack Checklist and Dates

Provisional Working Kidnap Coding Frame

Notes on Use

For all items in the checklist, use the codes indicated to mark whether details were present or not. For variables with 1/2/3 1=yes, 2=no, 3=uncertain/unknown; use discretion in allocating a no or unknown code; only code as 'no' when reasonably certain that a detail was not present.

Background Details

This section deals with basic details of who the various parties involved in the hostage taking situation.

- | | | |
|----|----------------------|---|
| 1. | Were the terrorists: | |
| | Not named | 1 |
| | Named group | 2 |

Indicate whether the terrorists claimed group membership. Some will indicate membership of groups such as the IRA, ELF, PFLP, PLO etc. Others give themselves more specific names, such as the Segundo Telesforo Gomez unit of the ERP. In either case a code of 2 is marked. In any case in which there is no name indicated, code this item with 1.

- | | | |
|----|---|---|
| 2. | In what region of the world did the kidnap occur: | |
| | United States/Canada | 1 |
| | Mexico/Central America | 2 |
| | South America | 3 |
| | Europe | 4 |
| | Middle East | 5 |
| | East and Far East/Asia | 6 |
| | Africa | 7 |
| | Australasia | 8 |

Each kidnap case will indicate which country the event occurred in. Indicate in which region of the world which the country is found.

- | | | |
|----|-------------------------------|---|
| 3. | How many hostages were taken: | |
| | One | 1 |
| | Two | 2 |
| | Three to five | 3 |
| | Six to ten | 4 |
| | Eleven or more | 5 |
| | Unspecified | 6 |

Using these groups, indicate how many hostages were taken during the event.

- | | | |
|----|--|----|
| 4. | From what region did the hostages originate: | |
| | United States/Canada | 1 |
| | Mexico/Central America | 2 |
| | South America | 3 |
| | Europe | 4 |
| | Middle East | 5 |
| | East and Far East/Asia | 6 |
| | Africa | 7 |
| | Australasia | 8 |
| | Mixed nationalities | 9 |
| | Unknown | 10 |

What was the role of the hostage(s)

- The role of the hostage(s) refers to their occupation or purpose of being in the place that they were in. 'Foreign' refers to any person from a country other than that in which the event occurred. 'Home' refers to a national of that country.

- This item is used to indicate the relative size and complexity of a hostage taking event. It can range from small hostage grabbing operations through to large scale attack and abductions. The exact point at which a small event becomes a large one is not definitive, the context of the event must be considered in order to indicate as close as possible what scale it is. As a rule of thumb, up to five or six hostages and kidnappers is small scale, more people is large scale.

This section of the checklist is used to code details of the event initiation itself. No details of the hostage holding phase should be considered at this point.

- This item is used to indicate exactly where the hostages were at the time of their abduction.

- B-4

This item is used to indicate whether the kidnappers approached their targets in an openly hostile manner or whether they attempted to cover their intent until the last moment (for example, by approaching the target disguised as a postman).

Did the kidnappers take:

- | | | |
|-----|--|-------|
| 20. | Apparently targeted hostages | 1/2/3 |
| 21. | Apparently targeted hostages and others | 1/2/3 |
| 22. | Hostages selected more or less at random | 1/2/3 |

From the event details would it appear that any hostages had been specifically targeted or were they taken opportunistically. If some did appear to have been targeted, were other, previously unconsidered, persons taken hostage at the same time?

- | | | |
|-----|--|-------|
| 23. | Did the terrorists have guns | 1/2/3 |
| 24. | Did the kidnappers have explosives/incendiaries/grenades | 1/2/3 |
| 25. | Did the kidnappers have knives/swords | 1/2/3 |
| 26. | Did they have other weapons | 1/2/3 |

Indicate whether the kidnappers had any of these types of weapons.

- | | | |
|-----|--|---|
| 27. | Did the terrorists use their weapons during the event initiation | |
| | Used spontaneously to hit people with | 1 |
| | Used spontaneously as intended | 2 |
| | Used in response to perceived threat to hit people | 3 |
| | Used in response to perceived threat as intended | 4 |
| | Did not use weapons | 5 |
| | Unknown | 6 |

Use this item to indicate whether or not the terrorists used their weapons in taking the hostages. Threatening hostages does *not* constitute using a weapon, hitting with a weapon or using it as designed/intended (eg cut with knife, firing a gun) does.

- | | | |
|-----|--|-------|
| 28. | Were any hostages injured during the event initiation | 1/2/3 |
| 29. | Was anyone not taken hostage injured during the event initiation | 1/2/3 |

Indicate whether anyone was injured and if so, who.

- | | | |
|-----|---|-------|
| 30. | Was anyone killed during the event initiation | 1/2/3 |
|-----|---|-------|

If anyone was killed during the event initiation indicate this.

Did the terrorists have:

- | | | |
|-----|---|-------|
| 31. | light vehicles (cars/jeeps/pick-ups/small vans) | 1/2/3 |
| 32. | heavy vehicles (trucks/big vans) | 1/2/3 |
| 33. | special vehicles (eg ambulance/armoured car) | 1/2/3 |

Indicate what, if any, type of vehicle(s) the kidnappers had.

- | | | |
|-----|--|-------|
| 34. | Were vehicles used actively in blocking potential hostage escape | 1/2/3 |
| 35. | Was hostage's own vehicle taken | 1/2/3 |

Use these items to indicate whether the kidnappers used their vehicles tactically and whether they made use of the hostage's vehicle.

Hostage Holding Phase

36. Were demands issued by the kidnappers:
- | | |
|------------------------------------|---|
| not at all | 1 |
| immediately after event initiation | 2 |
| some time after event initiation | 3 |
| Unknown | 4 |

Indicate whether the kidnappers made demands or not. By 'immediately after the event' is meant demands issued either at or relatively soon after the event initiation. Code as 'some time after' if it is clear that demands were only made after a period of no contact.

What were the demands for:

- | | |
|---|-------|
| 37. Release specified prisoners | 1/2/3 |
| 38. Release general prisoners | 1/2/3 |
| 39. Money | 1/2/3 |
| 40. Publication of statement | 1/2/3 |
| 41. Broadcast of statement | 1/2/3 |
| 42. Political change | 1/2/3 |
| 43. Information from authorities | 1/2/3 |
| 44. Recognition for the terrorist group | 1/2/3 |
| 45. Cease search for terrorists | 1/2/3 |
| 46. Other demands | 1/2/3 |

If demands were made, indicate which they were on these items. Any demand for which there is no specific code (such as demands flight, clothing for the poor etc) code as 'Other demands'. If no demands were made at all, simply indicate 'no' on all of these items.

47. Did the kidnap appear to be motivated by publicity per se 1/2/3

Indicate whether the event appeared to be motivated by the publicity alone. This is usually the case when no demands are made, the kidnapping being to generate awareness. It is possible that the event may be for publicity per se even when demands are made, this will depend upon the nature of the demands.

48. Were the hostages questioned/interrogated 1/2/3

Indicate whether the hostages were questioned or interrogated regarding specific matters by their captors.

49. Were hostages:
- | | |
|----------------------------------|---|
| held in one place | 1 |
| moved between a number of places | 2 |
| Unknown | 3 |

Indicate whether hostages were kept in one place throughout their captivity, or whether they were moved between a number of locations.

50. How were the hostages treated during their captivity:
- | | |
|--|---|
| Kidnappers were polite and treated hostages well | 1 |
| Kidnappers treated their hostages strictly as prisoners | 2 |
| Kidnappers threatened the hostages/psychologically abused them | 3 |
| Kidnappers physically harmed/tortured the hostages | 4 |
| Hostage killed purposefully | 5 |
| Not known | 6 |

Indicate how the hostages were generally treated by their captors during their captivity.

51. Did kidnappers accuse the hostages of being spies/agents 1/2/3

While the hostages were being held, did the kidnappers accuse them of being spies or agents for another country/organisation?

52. Did more than one group claim credit for the kidnapping 1/2/3

Indicate whether more than one group claimed to have carried out the event, or whether more than one group issued demands for the return of the hostages.

53. Were hostages passed to another terrorist group for any reason 1/2/3

Indicate whether the group which initially took the hostages passed them to another group for any reason.

54. Was evidence of the hostages provided 1/2/3

Did the kidnappers provide any type of evidence that they held the hostages, this may range from letters in the hostages handwriting, through to audio and video cassettes of the hostages.

55. Did kidnap appear to be motivated by personal/financial gain 1/2/3

56. Did kidnap appear to be motivated by political/organisational gain 1/2/3

Indicate the type of motivation which appears to underly the event. This is generally indicated by the types of demands issued. Personal and financial motives are generally material and monetary gains for the terrorists themselves. Political and organisational motives are those which are aimed above and beyond immediate personal gain.

Who was involved in negotiations

57. Home government 1/2/3
58. Home security services 1/2/3
59. Hostage's government 1/2/3
60. Other governments 1/2/3
61. Independent/international agencies 1/2/3
62. Hostage's company 1/2/3
63. Hostage's family 1/2/3
64. Other terrorist groups 1/2/3

Indicate which, if any of these groups were involved in any negotiations. If they are not mentioned assume that they are not involved. If a group are referred to in the text, but not explicitly as being in the negotiations code as 'not known' rather than 'no'.

65. Were demands rejected even though negotiations not refused 1/2/3

Use to indicate whether a group involved in the negotiations rejects the demands made but does not refuse to negotiate further.

66. Were alternative concessions offered instead 1/2/3

If a group rejects the demands do they do so leaving the options open to the kidnappers or do they suggest some alternative concessions of their own?

Did anyone publicly refuse to enter negotiations

67. Home government 1/2/3
68. Hostage's government 1/2/3
69. Other governments 1/2/3
70. Independent/international agencies 1/2/3
71. Hostage's company 1/2/3

- | | | |
|-----|------------------------|-------|
| 72. | Hostage's family | 1/2/3 |
| 73. | Other terrorist groups | 1/2/3 |

Indicate if any group openly declared that it would not negotiate with the kidnappers.

During the course of the event, did the kidnappers

- | | | |
|-----|------------------------|-------|
| 74. | Increase their demands | 1/2/3 |
| 75. | Change their demands | 1/2/3 |
| 76. | Decrease their demands | 1/2/3 |

Indicate whether the kidnappers altered their demands in any way. Increasing and decreasing the demands means changing the level of the demands already made, eg asking for £1 million first and upping it to £2 million later. Changing demands refers to a qualitative change in the demands, eg asking for prisoner release initially and later dropping this but demanding information from the authorities.

- | | | |
|-----|----------------------------------|---|
| 77. | Did the kidnappers set deadlines | |
| | None set | 1 |
| | Up to one day | 2 |
| | From one day to a week | 3 |
| | From one week to a month | 4 |
| | Over one month | 5 |
| | Unspecified time limit | 6 |
| | Unknown | 7 |

If the kidnappers set deadlines for the meeting of the demands indicate roughly how long the deadlines were for.

- | | | |
|-----|---|---|
| 78. | What was threatened if the deadlines were not met | |
| | None set | 1 |
| | Hostage injury/death | 2 |
| | Not specified | 3 |
| | Unknown | |

Indicate what the kidnappers threatened if their demands were met on time.

- | | | |
|-----|---|---|
| 79. | If deadlines set had passed, were threats carried out | |
| | None set | 1 |
| | Yes | 2 |
| | No, deadline extension announced | 3 |
| | No, deadlines slipped by unnoticed | 4 |
| | No, deadlines were met | 5 |
| | Unknown | 6 |

Indicate whether the kidnappers actually carried out their threats.

- | | | |
|-----|--|---|
| 80. | Were any of the kidnappers demands met | |
| | None set | 1 |
| | No demands were met | 2 |
| | Some concessions | 3 |
| | All demands met | 4 |
| | Unknown | 5 |

Did any party meet the kidnappers demands?

Who conceded any demands that were met:

- | | | |
|-----|----------------------|-------|
| 81. | home government | 1/2/3 |
| 82. | hostage's government | 1/2/3 |

- | | | |
|-----|------------------------------------|-------|
| 83. | other governments | 1/2/3 |
| 84. | independent/international agencies | 1/2/3 |
| 85. | hostage's company | 1/2/3 |
| 86. | hostage's family | 1/2/3 |
| 87. | other terrorist group | 1/2/3 |

If any of the demands were met, who met them?

- | | | |
|-----|---|-------|
| 88. | Were any hostages injured/killed as a result of the actions of the authorities (eg. searching, continued non-negotiation etc) | 1/2/3 |
|-----|---|-------|

Did the kidnappers harm the hostages on the grounds that the authorities actions lead them to do so?

- | | | |
|-----|--|-------|
| 89. | Did any of the hostages manage to escape captivity | 1/2/3 |
|-----|--|-------|

Indicate whether they did or not

- | | | |
|-----|----------------------|-------|
| 90. | Were they recaptured | 1/2/3 |
|-----|----------------------|-------|

Indicate whether they were or not

Hostage Release Prior to event Closure:

- | | | |
|-----|--|-------|
| 91. | All hostages spontaneously released for no reason or gain | 1/2/3 |
| 92. | Some hostages released spontaneously, others were still kept | 1/2/3 |
| 93. | Hostages released after interrogation | 1/2/3 |
| 94. | Some hostages released through negotiations, others kept | 1/2/3 |
| 95. | Injured/ill/weak/vulnerable hostages released | 1/2/3 |

If any of the hostages were released by their kidnappers please indicate in what manner or for what reasons they were released.

Event Closure and Outcomes

- | | | |
|-----|----------------------------------|-------|
| 96. | Did hostage death end the event | 1/2/3 |
| 97. | Did hostage escape end the event | 1/2/3 |

Was either of these eventualities responsible for the end of the kidnapping event.

- | | | |
|-----|--|-------|
| 98. | Did the kidnappers escape arrest/retribution | 1/2/3 |
|-----|--|-------|

Use this to indicate whether the kidnappers escaped retribution from the authorities. This refers to the *event closure* itself - if the kidnappers are caught later, after the event closure, this item should still be coded as 'yes' if they did get away at the event closure itself.

- | | | |
|-----|------------------------------|-------|
| 99. | Did the kidnappers surrender | 1/2/3 |
|-----|------------------------------|-------|

Indicate whether or not the kidnappers voluntarily gave themselves up

- | | | |
|------|--|-------|
| 100. | Did the authorities find the kidnappers location | 1/2/3 |
|------|--|-------|

Did the authorities find out where the kidnappers were holding the hostages?

- | | | |
|------|--|-------|
| 101. | Were the kidnappers offered freedom Bangkok Solution | 1/2/3 |
|------|--|-------|

Were the kidnappers offered a deal in which they get free passage out of the country in return for reducing or dropping their demands?

102. If offered was a get out accepted 1/2/3

If a deal was offered, did the kidnappers take it?

103. If found, were they stormed 1/2/3

104. If stormed: were the police involved 1/2/3

105. were military/specialised units used 1/2/3

If the terrorists location was found, were they overcome forcibly? If they were overcome forcibly, was it by a military or police team?

106. Were any terrorists killed in the event closure 1/2/3

107. Were any hostages killed in the event closure 1/2/3

108. Were any authorities killed in the event closure 1/2/3

In the event closure, was anyone killed as a direct result of the actions carried out?

If the terrorists were caught alive what was the outcome

109. freed 1/2/3

110. granted asylum 1/2/3

111. extradited 1/2/3

112. enprisoned 1/2/3

113. executed 1/2/3

114. unknown outcome 1/2/3

If terrorists were caught during the event closure how were they dealt with?

115. How long did the event last for

Hours (up to 24) 1

Days (25 hours to 7 days) 2

Weeks (from 8 days to 4 weeks) 3

Months (from 4 weeks to 12 months) 4

Years (one year or longer) 5

Unknown 6

Indicate how long the event lasted from initiation to closure.

Kidnap Event Dates

<u>Case No.</u>	<u>Date</u>
1	04 Sept 69
2	11 March 70
3	31 March 70
4	11 June 70
5	31 July 70
6	31 July 70
7	07 Aug 70
8	05 Oct 70
9	01 Dec 70
10	07 Dec 70
11	08 Jan 71
12	04 March 71
13	17 May 71
27	23 May 71
28	19 Nov 71
14	21 March 72
29	27 March 72
30	23 Jan 73
31	04 May 73
32	18 June 73
15	06 Dec 73
33	03 Jan 74
34	26 March 74
16	21 April 74
35	23 April 74
36	27 May 74
37	28 Aug 74
17	19 Sept 74
38	31 Jan 75
39	26 Feb 75
18	27 Feb 75
40	23 March 75
19	19 May 75
20	29 June 75
42	31 July 75
43	26 Aug 75
21	03 Oct 75
44	29 Oct 75
45	07 Nov 75
22	27 Feb 76
46	25 May 76
23	11 June 76
24	11 Dec 76
41	13 April 77
47	20 May 77
48	29 May 77
25	07 Sept 77
26	16 March 78
49	17 May 78
50	14 Aug 78
51	01 Jan 79
52	21 Aug 79
53	09 Dec 80
54	19 Jan 81
55	20 Feb 81
56	17 Dec 81
57	12 May 82
58	23 July 82
59	14 Dec 82
60	07 March 83

61	20 April 83
62	24 June 83
63	29 June 83
64	08 July 83
65	10 Sept 83
66	18 Oct 83
67	03 Feb 84
68	23 Feb 84
69	xx Feb 84
70	16 March 84
71	08 May 84
72	10 May 84
73	23 June 84
74	03 Dec 84
75	08 Jan 85
76	25 March 85
78	22 May 85
79	28 May 85
80	07-08 June 85
81	07 Aug 85
82	10 Sept 85
83	30 Sept 85
85	17 Jan 86
86	31 Jan 86
87	08 March 86
77	08 April 86
84	12 July 86
88	19 July 86
89	15 Nov 86
90	27 Dec 86
91	12 Jan 87
92	13 Jan 87
93	18 Jan 87
94	20 Jan 87
95	20 Jan 87
96	24 Jan 87
97	05 May 87
98	13 May 87
99	17 June 87
100	17 July 87
101	01 Sept 87

Appendix C

Kidnap Checklist and Dates

Provisional Working Hijack Coding Frame

Notes on Use

All items in the hijack coding scheme are coded dichotomously, either 2 for 'yes' or 1 for 'no'. The 'Yes' response is used when the answer is either stated or clearly implied in the incident report. The 'no' response is used when an aspect is clearly not present or when it is not possible to tell (i.e. 'no' also includes 'don't know').

1. US plane
2. Israeli plane
3. Japanese plane
4. European plane
5. Other plane

These items are used to code the nationality of the airline operating the aircraft which has been hijacked.

6. International flight
7. Domestic flight

Indicate whether the plane is an international or a domestic flight. This refers to the original schedule regardless of where the plane is diverted to.

8. Held up Stewardess
9. Passed note

Indicate how the terrorists initially made themselves known to the crew and the passengers of the plane.

10. Reassuring Message to passengers

Indicate whether the hijackers specifically indicated to their hostages that they would not be harmed if they cooperated, remained peaceful etc.

11. Polite

Were the hostages reported to have been courteous or polite to their hostages in the duration of the flight?

12. Made radio broadcast

Did the terrorists make their own broadcast? This item is used to indicate a message for general broadcast directly from the terrorists rather than communication with air traffic control.

13. Deliberate damage to plane
14. Threatened damage to the plane

These questions are used to indicate whether the terrorists either threatened or actually carried out any damage to the plane. This includes all levels of physical damage, from shooting at windows or walls through to destruction of the entire plane with explosives.

15. Hostages removed to another site

Were all or any of the hostages taken from the aircraft and held in other locations? Moving the hostages does not imply freeing them, it is used to indicate hostages being held captive in a location other than the plane.

16. 'Light' guns
17. Machine guns
18. Explosives
19. Grenades
20. Other weapons (Knives, swords etc)

These items are used to indicate the type(s) of weapons held by the terrorists. 'Light' weapons encompasses hand guns and rifles up to and including fully automatic assault rifles. 'Machine guns' was used to cover the use of machine guns of all types.

21. Reveals personal
22. Reveals hijack
23. Reveals cause

These items are used to indicate whether the hijackers revealed specific information *during the course of the hijack*. 'Personal' refers to information relating to the personal lives of the hijackers. 'Hijack' refers to details such as mission details, how planned or what their expectations were. 'Cause' refers to the hijackers motivations e.g. political, religious etc.

24. Suicidal
25. Martyrdom

These two items refer to the terrorists apparent willingness to die as a result of the hijack. Suicide refers to cases where a terrorist refers to a desire to kill self if the hijack goes wrong. Martyrdom refers to cases where terrorists claim willingness to die specifically for their cause.

26. Shots fired forced
27. Spontaneous shots

In situations in which there was gun fire on the part of the terrorists, was this in response to the actions of others (eg attacking the terrorists) or at the terrorists own initiative (eg to scare the hostages)?

28. Tied passengers
29. Verbal restraint of passengers
30. Threat controls passengers

These items relate to various ways of controlling the passengers. Tying of passengers refers to cases in which passengers (some or all) are physically restrained in some way. Verbal restraint refers to cases in which passengers are merely told what to do (eg, "stay seated"). Threat controls refers to situations in which the passengers are subjected to overt threats of physical violence or death in order to control them.

31.]
32.] These items redundant - not included in the data set
33.]

34. Demoralisation

Were the passengers ill treated in order to reduce their morale?

35. Immediate release of all passengers
36. Immediate release of "weak" (gender, young & old)
37. Immediate release of nationality

These items are used to indicate situations in which groups of passengers are allowed off the plane immediately on arrival at the planes first stop.

- 38. Compassionate release
- 39. Release later as negotiation

These items are used to refer to the release of single or groups of passengers at any stage of the hijack.

- 40. Release crew

This item is used to indicate when the crew specifically (both flight and cabin) are allowed to leave the plane.

- 41. Demand release of specific prisoners
- 42. Demand release of general prisoners

If the terrorists demand the release of prisoners, are they named or otherwise exactly specified (eg by event imprisoned for) or is the demand more general (eg all Arab prisoners in Israel)?

- 43. Demand money for self
- 44. Demand money for others

If the terrorists ask for money as part of their demands is it for themselves or for others? In the case of terrorists from organisations (eg PFLP, JRA etc.) then 'self' is used to encompass any money specified as being for their own organisation as well.

- 45. Demand for publicity

Do the terrorists want media coverage as a specific objective of the event?

- 46. Demand travel per se
- 47. Demand safe passage

If the terrorists demand travel (as a specific demand, not merely the initial diversion of the plane), in what manner is it demanded? Travel per se refers to cases where terrorists start off the event with clear plans to go to a specific location as a result of the hijack. 'Safe passage' refers to situations where terrorists later demand to be allowed to go somewhere in order to escape (eg, for political asylum).

- 48. Offered the Bangkok solution
- 49. Accept Bangkok solution

The Bangkok Solution is a bargain in which the terrorists are given safe passage by the authorities concerned in return for dropping their demands and releasing their hostages.

- 50. Lessen demands

Do the terrorists lessen their demands during the course of the event?

- 51. Let deadlines pass

Do the terrorists make deadlines which they subsequently let pass without incident?

Aerial Hijacking Dates

<u>Case No.</u>	<u>Date</u>
24	03 08 61
25	21 02 68
19	22 07 68
61	28 01 69
1	29 08 69
2	01 11 69
23	01 01 70
3	31 03 70
4	04 06 70
62	22 06 70
27	22 07 70
5	06 09 70
6	06 09 70
7	06 09 70
8	07 09 70
26	09 09 70
10	15 10 70
63	09 11 70
20	30 01 71
30	12 06 71
64	24 11 71
28	22 02 72
11	03 05 72
29	08 05 72
65	03 06 72
66	18 08 72
67	22 10 72
68	10 11 72
9	20 07 73
69	25 11 73
70	15 07 74
22	07 04 76
21	21 05 76
12	27 06 76
13	23 08 76
14	10 09 76
15	10 09 76
71	14 03 77
72	29 06 77
16	28 09 77
17	13 10 77
73	16 05 78
74	16 01 79
75	04 04 79
18	07 09 79
31	14 01 80
76	18 01 80
77	28 01 80
78	06 05 80
79	12 07 80
80	17 09 80
81	05 12 80
32	15 12 80
33	02 03 81
34	27 03 81
35	28 03 81
36	24 05 81
37	29 09 81
38	07 12 81
39	27 01 82